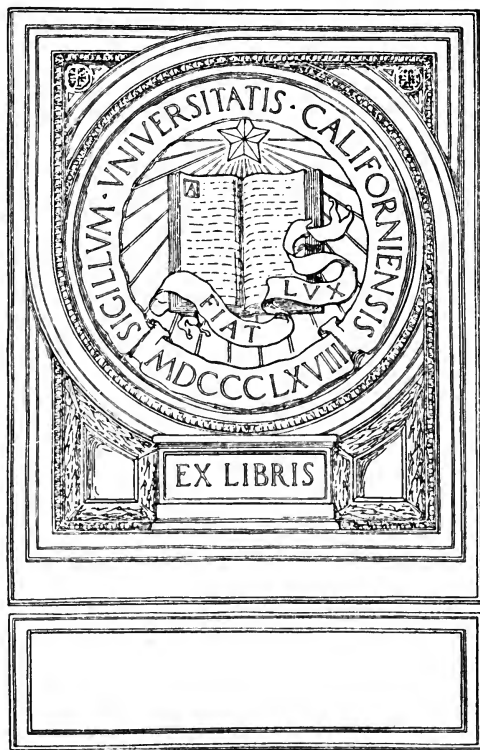
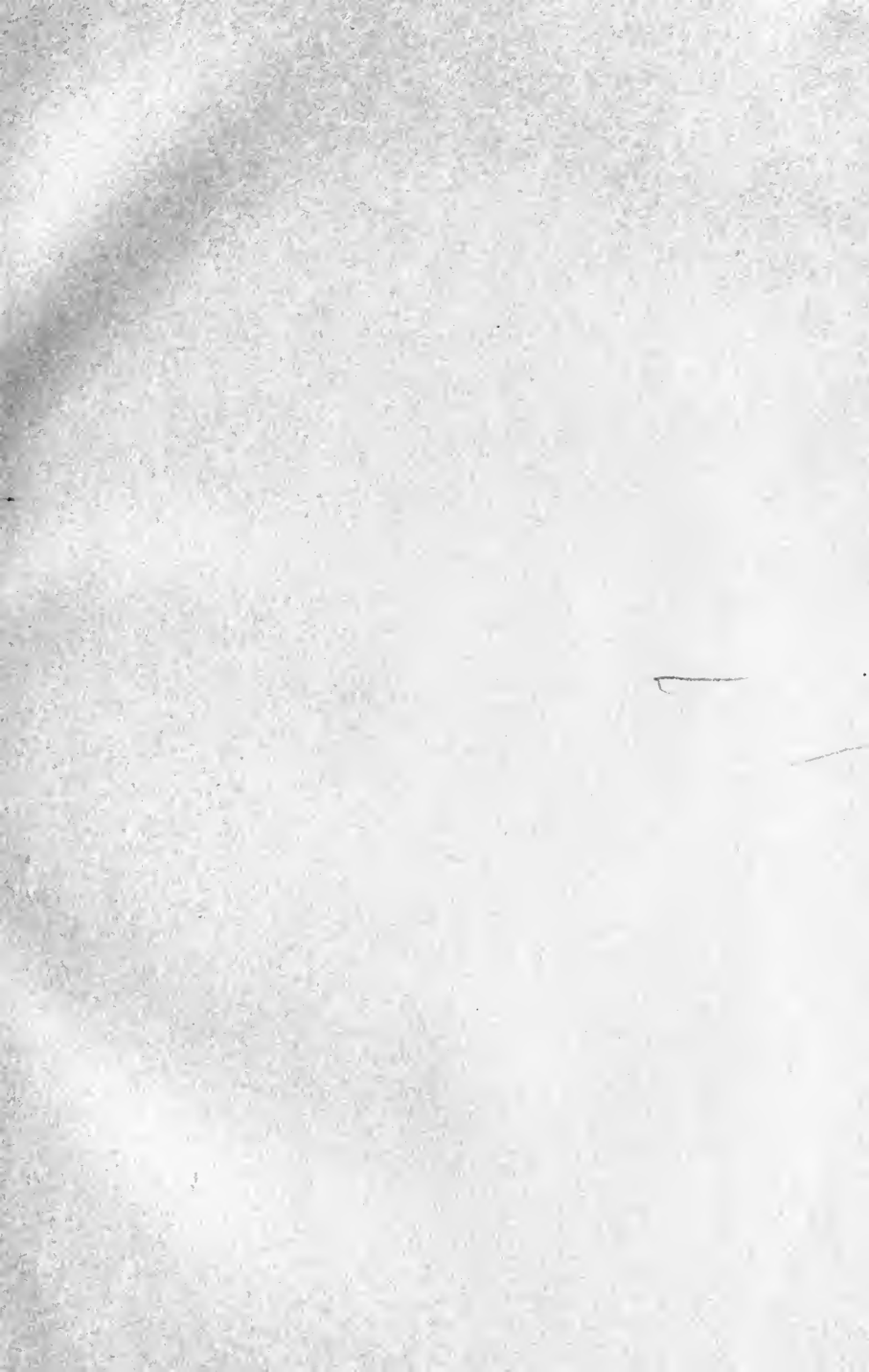


5B 67 161





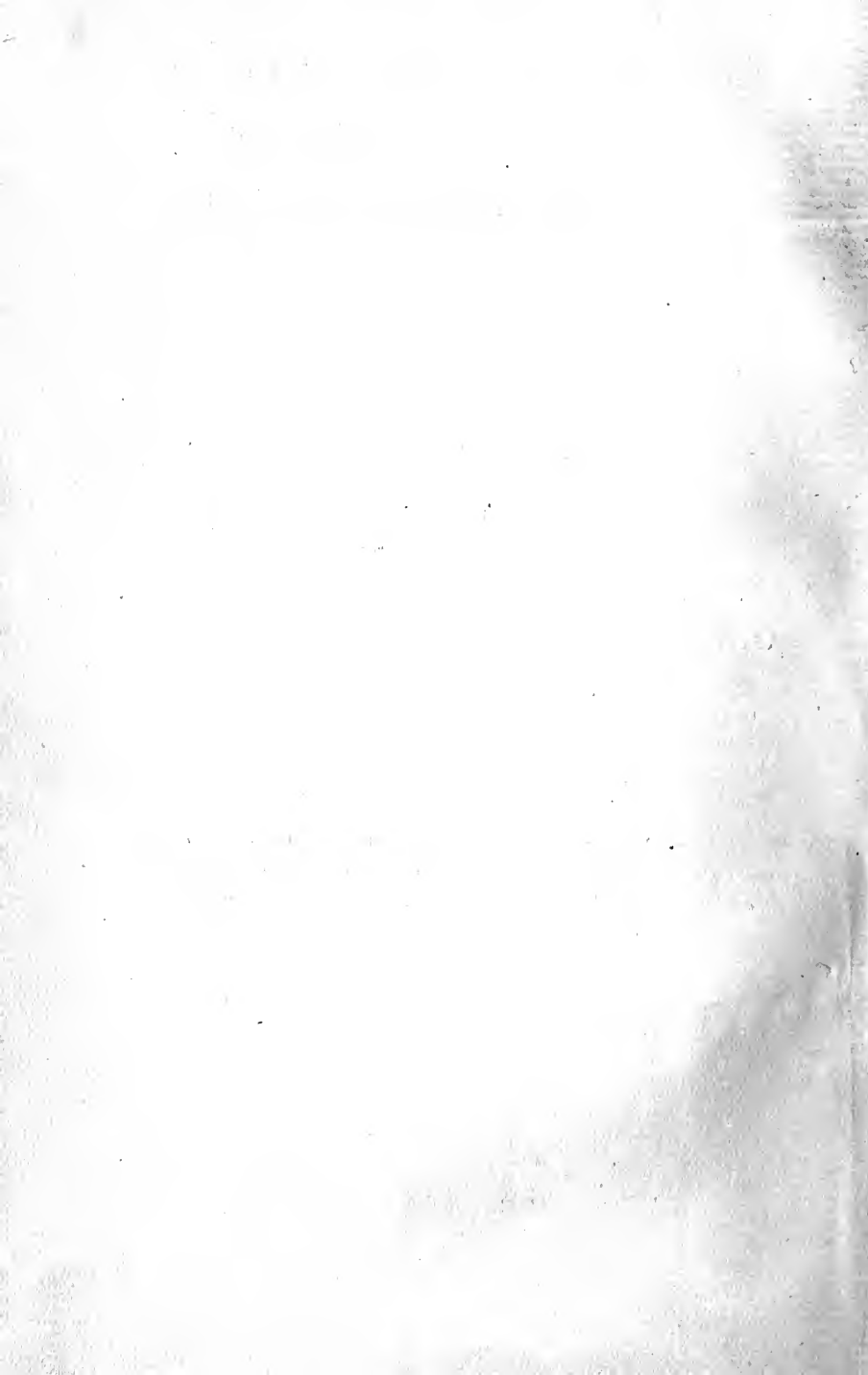


Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation



3 AND 4

A HISTORICAL AND CRITICAL DIS-
CUSSION OF COLLEGE ADMISSION
REQUIREMENTS



A HISTORICAL AND CRITICAL DISCUSSION OF COLLEGE ADMISSION REQUIREMENTS

BY
EDWIN C. BROOME

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE
FACULTY OF PHILOSOPHY, COLUMBIA UNIVERSITY



NEW YORK

1902

150
Lign
Col. Hines

PREFACE.

It is difficult to conceive of an educational problem of any depth or significance which does not have a history. There is scarcely an idea in the so-called "new education" which has not found expression in the practice or theory of the past. In order, then, to comprehend the possibilities as well as the limitations of any latter-day problem it is necessary to know of the attempts, successes, and failures of the past. In fact, from such attempts, failures, and successes present educational conditions have resulted. Hence the importance of the study of the history of education in general and of the historical setting of any important problem.

The problem of college admission requirements, at first thought, does not suggest any considerable history. In the beginning, therefore, it was the writer's plan to concentrate his attention upon present aspects of the problem, and to touch briefly only upon the historical development as an introduction to the thesis. It was found, however, that the only first-hand historical material accessible was in the various college catalogues; and no catalogues were issued prior to 1800. For the first hundred and fifty years of higher education in the United States, therefore, there was no published record of college admission requirements, and even competent historical authorities had no certain knowledge of the conditions of admission or the changes therein previous to the nineteenth century. In order to collect reliable material it was necessary to visit the libraries of the different colleges and examine the statutes enacted from the establishment of each college to about 1820 or later. Frequently the statutes were in Latin and needed translation, and, in almost every case, were in manuscript. In view of these facts it has seemed advisable to trace the development of college admission requirements with considerable detail

from the foundation of Harvard College to date; because, first, the work may be a slight contribution as a bit of historical research in the field of American educational history; and, secondly, it may assist to a more intelligent discussion of present-day aspects of the subject.

The plan of the dissertation is as follows: (1) The historical discussion, with some interpretation and comparison along the line; (2) a discussion of present phases of the problem. In part (I) six colleges have been considered. These are Harvard, Yale, Princeton, Columbia, the University of Michigan, and Cornell. Other colleges are incidentally referred to. In the selection of these institutions priority of establishment as well as present influence has been regarded. In part (II) the writer has approached the subject for the most part from the point of view of the secondary school, and he has kept in mind the needs of the public high school in particular.

The chief sources are: for the historical part, the statutes, catalogues, and histories of the colleges considered; for the second part, the proceedings, reports, and published addresses of the associations which have been most active in the discussion of the problem of college admission requirements.

The writer is indebted to Dr. James E. Russell, Dean of Teachers College, for the suggestion of the subject and its scope; to Mr. William G. Brown, of Harvard University; Mr. F. B. Dexter, of Yale University; Mr. V. Lansing Collins, of Princeton University, and to John B. Pine, of New York, for assisting the writer to secure valuable material; and to President Nicholas Murray Butler, of Columbia University, to President Charles W. Eliot, of Harvard University, to Professors Munroe and Dutton, of Teachers College, and to Professor Elmer E. Brown, of the University of California, for helpful suggestions.

RAHWAY, N. J., *April*, 1903.

CONTENTS

INTRODUCTION	9
------------------------	---

The founding of Harvard College—Relation to English Universities (Cambridge and particularly Emanuel College)—Two factors which determined the unique character of the colonial college.

PART I

THE HISTORICAL DEVELOPMENT OF COLLEGE ADMISSION REQUIREMENTS	17
--	----

CHAPTER I

CONCERNING ADMISSION REQUIREMENTS DURING THE COLONIAL PERIOD	17
--	----

Admission requirements at Harvard in 1642—Slight change in 1655—No further change during the century—Admission requirements as related to the curriculum—The curriculum cited—The question of the use of Latin—Good articulation—Note on the College of William and Mary—Conditions at the opening of the eighteenth century—Religious controversies—Yale College founded—Relation to Harvard—Entrance requirements at Yale in 1720 and 1726—Compared with Harvard requirements—Slight change at Harvard—Requirements at Yale in 1745 (arithmetic)—Requirements at Princeton in 1748—Remarks on the entrance terms—Requirements for admission to King's College in 1755—Comparison with other colonial colleges—Requirements for admission to Columbia in 1785—Signs of progress—Laxity in enforcement of regulations—Comparative table for the close of the eighteenth century—Uniformity noted.

CHAPTER II

CONCERNING COLLEGE ADMISSION REQUIREMENTS DURING THE NINETEENTH CENTURY	40
---	----

Religious, social, and political changes—A new demand—The academies—Rapid addition of new subjects: Geography, grammar, algebra—A parallel course at Columbia (French)—The University of Michigan; admission requirements—Geometry, ancient history, United States history, physical geography—Continual increase in the amount of the original subjects, as well as addition of new subjects—The year of 1870 a point of transition—Comparative table for 1870—Table for 1870 compared with that for 1800—New subjects since 1870: Modern languages, English composition and literature, scientific studies—Table of subjects introduced during the nineteenth century—Tendencies since 1870 in admission terms: addition of new subjects, changes in original subjects, flexibility, change in the character of the entrance examination, and influence on secondary-school methods.

PART II

COLLEGE ADMISSION REQUIREMENTS AS A PROBLEM IN EDUCATIONAL ADMINISTRATION	71
INTRODUCTION	71
Conditions which caused the problem—Development of new demands—The growth of the public high school a factor—Two aims—Conservatism of colleges—The problem: to secure closer articulation between the college and the secondary school.	

CHAPTER III

FLEXIBILITY IN ADMISSION REQUIREMENTS	74
Parallel courses—Table showing when they developed—Distinctions between courses—Comparative table showing requirements for Ph. B course—B. L. and B. S. courses—Lack of definition in courses, as well as endless diversity in entrance conditions—Table showing how the four principal courses stood as regards admission requirements—Criticism of parallel courses—Flexibility in requirements for admission to the A. B. course—Development of flexibility at Harvard—Three systems: absolute prescription, group system, system of free election—Table showing list of subjects and extent of option at Harvard, Columbia, Michigan, and Leland Stanford—Discussion of flexibility in admission requirements; what it involves—Merits of different plans discussed—A suggestive scheme—Remarks on it.	

CHAPTER IV

THE "ACCREDITING SYSTEM"	116
Another means of securing articulation—Development of the system, Michigan, Indiana, Wisconsin, California—Diploma system distinguished from the certificate system—Advantages and disadvantages of the diploma system—A good system where there is a state system of schools under thorough supervision, and where adequate safeguards are possible.	

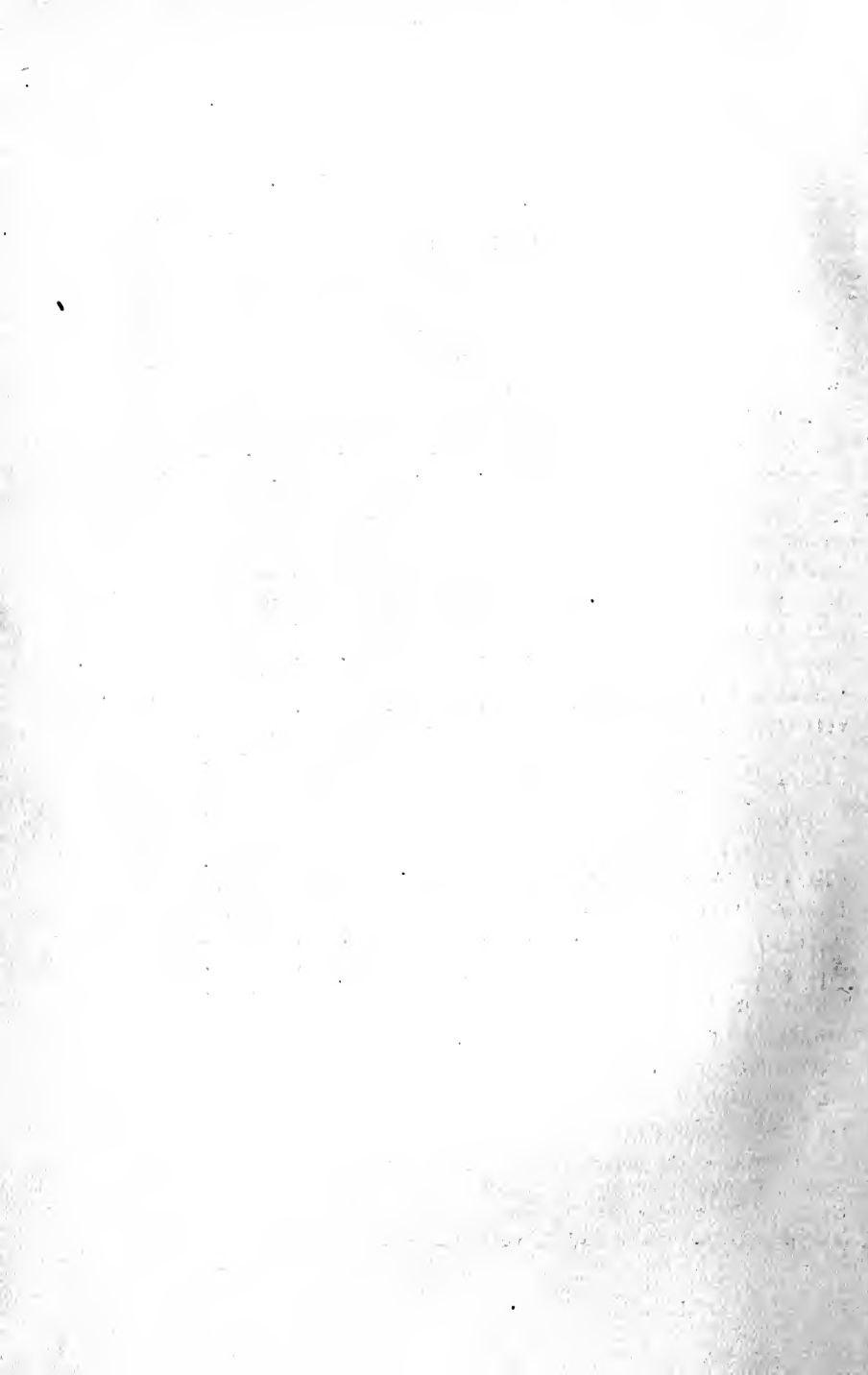
CHAPTER V

UNIFORMITY IN COLLEGE ADMISSION REQUIREMENTS	126
Lack of uniformity in 1870—Causes and evils—Co-operative attempts to secure uniformity by various organizations—Conference of New England Colleges—The New England Association of Colleges and Preparatory Schools; its work—The Committee on Secondary School Studies of the N. E. A.—National importance—The Committee on College-Entrance Requirements of the N. E. A.—The fourteen recommendations—Several discussed—National units or "norms"—Value of the report of the committee—College-Entrance Examination Board of the Middle States and Maryland—Aim and constitution—Discussion of the plan—Five advantages to be secured—A series of attempts to secure uniformity.	
Where the problem stands.	

CONCLUSION	147
BIBLIOGRAPHY	153

LIST OF TABLES

I. The curriculum of Harvard College about the middle of the seventeenth century	14
II. Comparative table of college admission subjects in 1800	41
III. Comparative table of college admission subjects in 1870	64
IV. Table showing the chronological order of the introduction of college-entrance subjects	78
V. Table showing the average amount of Latin and Greek required for admission to college in 1870 and in 1900	84
VI. Table showing when parallel courses developed in leading colleges	96
VII. Comparative table of requirements for admission to the Ph. B. course	98
VIII. Table showing relation of the four general courses at Cornell University in 1889 as regards admission terms	102
IX. Table showing the relation of the four general courses in 475 colleges as regards admission terms	104
X. Table showing the relative advantages of the four methods of admission to Harvard College from 1888 to 1898	122
XI. List and rating of subjects for admission to Harvard, Columbia, Michigan, and Leland Stanford Universities	134
XII. Table showing relative degrees of flexibility	135
XIII. Suggested plan of admission requirements	146





INTRODUCTION.

IN order to discuss intelligently any problem relative to the American college it is necessary to devote some attention to the unique character of that institution, and to the traditions which determined it. These conditions are most clearly exemplified in the development of Harvard University. In the first place, Harvard was the first college established on this side of the Atlantic, and thus became the connecting link in the transit of learning from the Old World to the New. Secondly, Harvard was the only college in the country for over half a century, and was consequently the most closely identified with the early development of colonial life. Thirdly, Harvard may rightly be called the mother of American colleges, so potent has been her influence in determining the character of subsequent colleges and the direction of collegiate study in this country.) In short, the history of Harvard College in itself comprises a complete account of the development of American university problems.

The first official action towards the establishment of Harvard College is to be found in the form of a decree of the General Court of Massachusetts for October 28, 1636.¹ It reads as follows: "The Court agrees to give 400 Pounds to bee paid the next yeare, and 200 Pounds when the worke is finished, & the next Court to appoint wheare & wt building." In addition to this sum, loyal Puritans contributed numerous useful articles, ranging all the way from a sugar spoon to a few sheep. The most important donation, and the one which doubtless decided the continuation of the enterprise, was the gift of John Harvard, who "bequeathed the Sum of Seven Hundred, seventy-

1. *Records of the Governor and Company of the Massachusetts Bay in New England*; printed by order of the Legislature; edited by Nathaniel B. Shurtleff, M. D., Boston, 1853; Vol. I., 183. Same decree is cited by Quincy, *History of Harvard University*, Vol. I., 8.

nine Pounds, seventeen Shillings and two Pence, towards the Pious Work of building a College."² And it was in recognition of this act of munificence that the General Court ordered, on March 13, 1639: "That the Colledge agreed upon formerly to bee built at Cambridge shall bee called Harvard Colledge."³

Thus far the college was a very rudimentary affair, struggling along against financial embarrassment. on the one hand, and inefficient management on the other. The school was under the direction of Nathaniel Eaton, whom Cotton Mather calls "fitter to be master of a Bridewell than a Colledge."⁴ His administration was terminated on August 27, 1640, by the appointment of the Rev. Henry Dunster to the title and powers of President. With this date begins the unbroken history of Harvard College and, at the same time, the history of higher education in the United States.

Harvard College, as we naturally would expect, in respect to studies, methods, and academic customs, was an English college transplanted to colonial soil. "The course of studies embraced the contemporaneous learning of the colleges of England."⁵ The charter of 1692 empowered the corporation of the college to confer degrees "pro more Academiæ in Angliæ." In this way Harvard was the connecting link in the educational chain between Europe and America. The relation of Harvard to the English universities was closer than in the case of colleges subsequently founded; for many of the latter, organized and managed as they were by Harvard graduates, were established, with some modifications, on the Harvard plan. The influence of Cambridge University was the strongest factor in determining the character of Harvard College. The majority of the learned men among the colonists were sons of that university.⁶ Presidents Dunster and Chauncey had both received

2. *Magnalia Christi Americana*, Book IV., 126.

3. *Records of the Governor and Company of the Massachusetts Bay in New England*, I., 253.

4. *Magnalia Christi Americana*, IV., 126.

5. Peirce, *History of Harvard University*, 7.

6 (a). Mr. Savage, in a note on the changing of the name of Newtowne to Cambridge, says: "There were probably, at that time (1638),

degrees from Cambridge; many of the early supporters of Harvard College were graduates of the same university, and, as a lasting testimonial of their loyalty, they changed the name of the seat of the colonial college from Newtowne to Cambridge.⁷ John Harvard, whose timely legacy saved the colonial college from financial ruin, was himself a graduate of Emanuel College, Cambridge. An additional reason why Harvard should have been intimately identified with Cambridge is that the Puritan sect, of which the founders of the Massachusetts Bay Colony were a branch, was always more influential at Cambridge University than at Oxford, and they would consequently be expected to have derived their educational ideas from their Alma Mater. Emanuel College was especially the Puritan college of Cambridge University. A curious old song, called the "Mad Puritan," illustrates to what extent the Puritan sect was identified with Emanuel College:

"In the house of *Pure Emanuel*
 I had my education,
 Where my friends surmise,
 I dazzled my eyes
 With the light of revelation:
 Boldly I preach,
 Hate a cross, hate a surplice,
 Mitres, copes, and rochets:
 Come hear me pray
 Nine times a day,
 And fill your head with crochets."⁸

forty or fifty sons of the University of Cambridge in Old England, one for every two hundred or two hundred and fifty inhabitants dwelling in the few villages of Massachusetts and Connecticut."

6 (b). "Of the first six hundred who landed in Massachusetts, one in thirty, it is said, was a graduate of the English Cambridge."—Boone, *History of Education in the United States*, 8. This statement is probably an overestimate.

7. "For place they fix their eye upon New-Towne, which to tell their posterity whence they came, is now named Cambridge."—Johnson's *Wonder-Working Providence*, 1654; quoted by Peirce, app. vi.

8. Dyer, *History of Cambridge*, II., 345.

The significant fact in the relationship between Harvard and Cambridge is that Harvard College was patterned after one division of Cambridge University. It was the college idea, and not the university idea, that prevailed.

Another factor which helped determine the character of the American college was that Harvard was founded at a time when educational as well as political institutions found their sanction in religion. The motive which determined the establishment of Harvard College is in strict keeping with the religious austerity of its founders. A letter written at the time says: "After God had carried us safe to *New England*, and we had builded our houses, provided necessities for our livelihood, rear'd convenient places for Gods worship, and settled the Civill Government: One of the next things we longed for, and looked after, was to advance *Learning* and perpetuate it to Posterity, dreading to leave an illiterate ministry to the churches, when our present ministers shall lie in the Dust."⁹ It was a religious motive purely that decided the establishment of Harvard College. Consequently, "during the first period" (1638-1692), says Quincy, "the College was conducted as a theological institution, in strict coincidence with the nature of the political constitution of the colony, having religion for its basis and chief object."¹⁰ To show how closely it was intended that education should further the ends of religion we need only cite a passage of the statutes which determined the conduct of Harvard College for a century and a half: "Considerato unusquisque ultimum finem vitæ ac studiorum, cognitionem nimirum Dei et Jesu Christi, quæ est vita æterna,"¹¹ John xvii., 3, or translated, "Every one shall regard the main end of life and studies to be a knowledge of God and of Jesus Christ, which is eternal life." (Not merely religion, but the narrowest orthodoxy and the most stifling and bigoted sectarian-

9. *New England's First Fruits*, p. 1. Published with "Old South Leaflets" as number 51. It is a letter written from the colony, and published in London in 1643.

10. Quincy, *History of Harvard University*, I., 3.

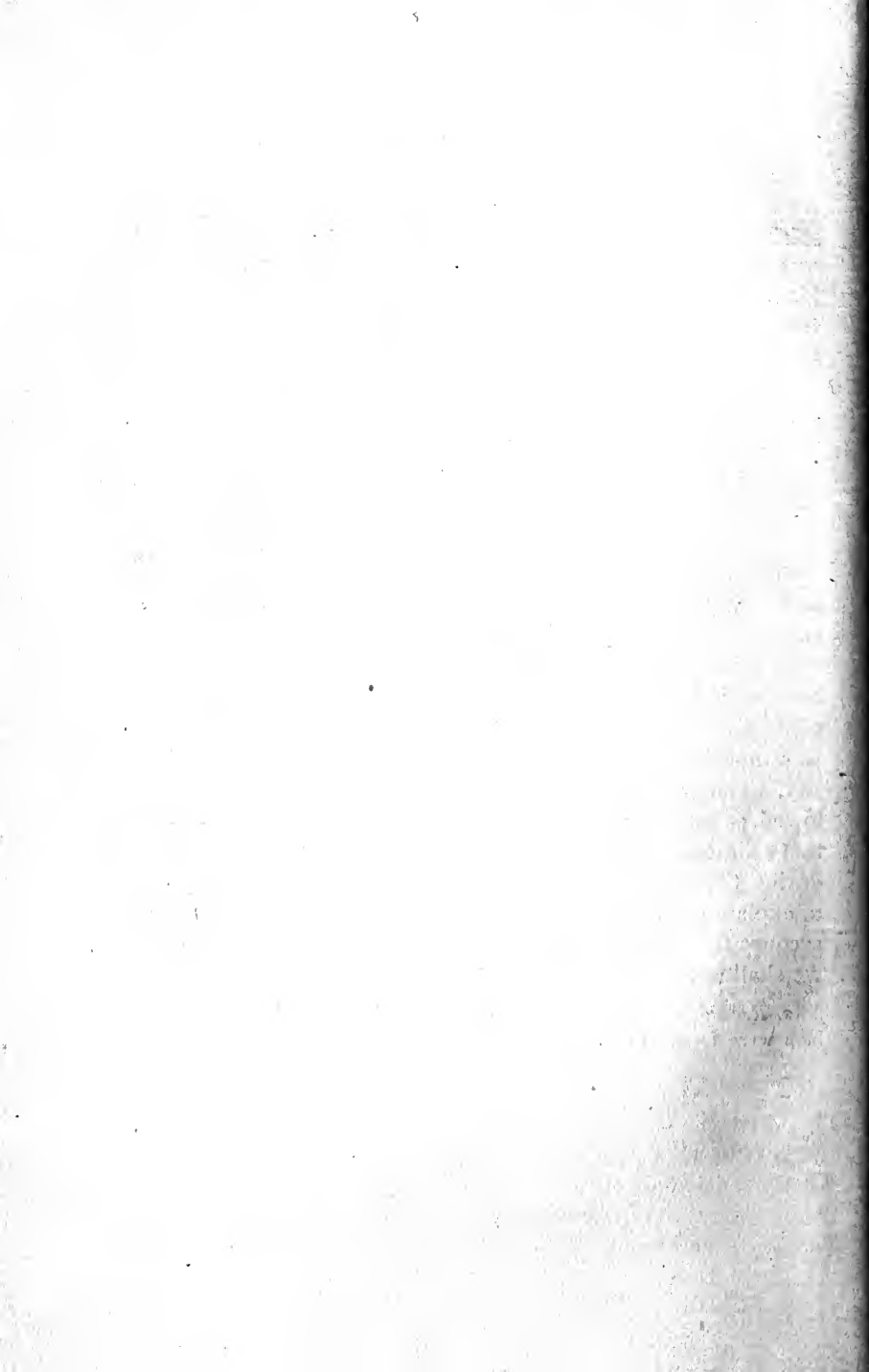
11. *Statuta Collegii Harvardini*, 1462, 2.

ism, controlled the educational policy of the day. The same intolerance that banished Roger Williams into the wilderness, the same fanaticism that burned witches at the stake, was the spirit breathed into the higher education of the colony. It is true that no religious test was ever inserted into the charter of Harvard College, nor was it necessary, when no one could be a freeman of the state who was not a member of the church—and of that church dominant at the time.¹² ✓

This narrow religious bias had both its evil and its beneficent effects on education; and for that reason we have emphasized it. On the one hand, sectarianism, with the religious controversies that later resulted from it, was the most influential factor in narrowing the aim, in restricting the curriculum, and in hindering the financial progress of the colonial college. On the other hand, however, it is altogether likely that college education would have been postponed a century but for the religious fervor of the colonists.

In this introduction two facts have been emphasized which have an intimate relation to the peculiar history of higher education in the United States. The first is, that Harvard College was modeled after but one subdivision of an English university, Emanuel College, whose customs and traditions were followed as closely as conditions would permit. The second is, that religious zeal was the controlling spirit of Harvard College during the early period of its history. These two facts go far to explain the unique character of the American college.) They account for much of the conservatism and slow progress which we shall note as this discussion proceeds.

12. *Records of Massachusetts*, I., 87. Until 1692 only church members were freemen and could vote.



A HISTORICAL AND CRITICAL DISCUSSION OF COLLEGE ADMISSION REQUIREMENTS

PART I

HISTORICAL DISCUSSION

CHAPTER I

CONCERNING COLLEGE ADMISSION REQUIREMENTS DURING THE COLONIAL PERIOD (1640-1800)

THE history of college admission requirements during the seventeenth century is simply the story of the changes which took place in the entrance conditions at Harvard College. No other college was established before 1700. It is true that the college of William and Mary dates its origin to the year 1693, but it did not develop beyond the stage of a preparatory school until the next century.

It has been stated that the real history of Harvard College began in 1638. Just what requirements for entrance were made on the score of young men who composed the student body from that time until the first commencement, in 1642, we have no way of determining. There were no regulations for the government of the college until 1642. Then, under the direction of President Dunster, a complete code of laws was drawn up. These statutes are preserved in College Book No. I., and below appear the regulations concerning the admission to college.

“Statuta, Leges, Privilegia, et Ordinationes, per Inspectores et Præsidentem Collegii Harvardini constitutæ An. Chr. 1642, 1643, 1644, 1645, 1646, et promulgatæ ad scholarum salutem et disciplinam perpetuo conservandam.

“I. Cuicumque fuerit peritia legendi Ciceronem aut quemvis

alium ejusmodi classicum authorem extempore, et congrue loquendi ac scribendi facultas oratione tam soluta quam ligata, suo, ut aiunt, Marte, et ad unguem inflectendi Græcorum nominum verborum-que paradigmata; hic admissionem in Collegium jure potest expectare. Quicumque vero destitutus fuerit hac peritia, admissionem sibi nequitiam vindicet."

The laws above quoted are in manuscript, and in apparently the same handwriting there is a translation adjoined which reads as follows (omitting the heading): "When any Scholar is able to read Tully or such like classical Latin Author extempore, and make and speake true Latin in verse and prose, suo (ut aiunt) Marte,¹ and decline perfectly the paradigms of nounes and verbes in ye Greeke tongue, then may hee bee admitted into ye College, nor shall any claime admission before such qualifications."

Regulations as to the religious and moral conduct of the students and academic forms similar to what obtained in English universities follow. Such were the requirements for admission to Harvard College in 1642, and the official records, so far as they are preserved, indicate no material change during the century. The so-called "Dudley Code" of 1686 (in College Book II.) prescribes the same entrance terms in precisely the same language. Mather's "Magnalia," published in London in 1702, quotes the laws of Harvard College, and the section on admission reads the same.² There are some indications, however, that the practice did not conform to the law. It was the custom at Harvard, and, in fact, in other colleges during the early colonial period, for the student at entrance to transcribe a copy of the college rules and regulations for his personal guidance. One of these transcriptions occasionally comes to light. Such a document was presented to the Massachusetts Historical Society in 1799 by John Pinchon, of Salem, Mass.³ It bears

1. *Suo, vestro, or nostro Marte*, was a Latin proverb meaning by one's own exertions, i. e., without any assistance whatever. It seldom appears translated.

2. Mather's *Magnalia Christi Americana*, Book IV., pp. 132-134.

3. *Proceedings of the Massachusetts Historical Society*, XIV., 207.

the date 1655, and the following are the terms of admission: "When any Scholler is able to read and understand Tully, Virgill or any such ordinary classical authors, and can readily make, speake, or write true latine in prose, and hath skill in makeing verse, and is completely grounded in the greek language, so as to be able to construe and gramatically to resolve ordinary greek, as the greek testament, Isocrates, and the Minor Poets or such like, haveing withall meet testimony of his towardness, he shall be capable of his admission into Colledge." A few years ago Dr. Green, of the Massachusetts Historical Society, picked up in a second-hand book-stall in Boston another transcription of the same date and bearing the signatures of Charles Chauncey and Leonard Hoar. This copy can now be seen in the archives of the Harvard Library. It agrees with the Pinchon copy almost exactly. These transcriptions vary slightly from the official Latin code, indicating, as they do, that "ability to construe and grammatically resolve ordinary greeke" was required for admission. The minutes of the Corporation from 1642 to 1687, included in College Books I. and II., contain no record of such a change. It is altogether likely, however, that the transcriptions state the requirements actually enforced, while the official statutes stated the regulations as they appeared on paper. It is probably an instance of what we frequently find to be the case—that is to say, change in practice often antedates by several years the revision of the statutes.

The requirements for admission to Harvard College as we have stated them remained without change during the seventeenth century; in fact, it was nearly the middle of the eighteenth century before there was any material addition to the entrance requirements for Harvard. The reason is easy to find. For about a century of its early life Harvard College had a bitter struggle for existence against poverty⁴ on the one hand,

4. At a meeting of the Corporation, April 8, 1695, *voted* "That six leather chairs be forthwith provided for the use of the Library, and six before the commencement, in case the treasury will allow of it."—Thayer. *Historical Sketch of Harvard University*, 7. The largest gift of the century, save John Harvard's, was £1000, by Matthew Holworthy.

and against sectarian disruption on the other. Economic and social conditions were in too crude a state, and their forces were too poorly organized, to lend any encouragement to the advancement of higher education. In fact, the curriculum of Harvard College stood throughout the century with scarcely any change. It was a very meager affair for a college, with hardly as much in it as we now have in the course of a well organized secondary school. Below the curriculum is introduced to show both what it comprised and why nothing beyond a knowledge of Latin and Greek was necessary in preparation for such a curriculum. The earliest account of a course of study at Harvard College is found in "New England's First Fruits." It has been arranged below in systematic schedule form for more ready reference.

TABLE I.

THE CURRICULUM OF HARVARD COLLEGE ABOUT THE MIDDLE OF THE SEVENTEENTH CENTURY.

FRESHMEN.⁵

Monday	8 A. M.	Lectures upon Logic.
and	8.45	Lectures upon Physics.
Tuesday	2 P. M.	Disputations.
	8 A. M.	Etymology and Syntax.
Wednesday	2 P. M.	Precepts of Grammar.
		Greek.
Thursday	8 A. M.	Hebrew Grammar.
	2 P. M.	Practice in Bible.
	8 A. M.	Rhetoric.
Friday	9 A. M.	Declamations.
		"Vacat rhetoricis studiis."

5 (a). The course was one of three years until about 1655. Sibley, in *Harvard Graduates*, Vol. I., in a note on page 16, cites in this connection a statement of Thomas Prince, who states that several scholars who would have graduated in 1653 left college because the Corporation made a law that the "Scholars should study at College four years before they commenced Batchelors in Arts."

(b). An index compiled by President Wadsworth to Book II. of the Harvard Records includes the following entry: "First degrees, an. 1654, denied to those of three years' standing," p. 5.

TABLE I.—Continued.

Saturday	8 A. M.	Divinity Catechetical.
	9 A. M.	Common Places.
	1 P. M.	History in Winter and the Nature of Plants in Summer.

JUNIOR SOPHISTERS.

Monday	9 A. M.	Lectures on Ethics and Politics.
and Tuesday	3 P. M.	Disputations.
Wednesday	9 A. M.	Prosody and Dialectics.
	3 P. M.	Practice in Poesy. Greek.
Thursday	9 A. M.	Chaldee.
	3 P. M.	Ezra and Daniel. Hebrew.
Friday	8 A. M.	Rhetoric.
	9 A. M.	Declamations. "Vacat rhetoricis studiis."
Saturday		Same as Freshmen.

SENIOR SOPHISTERS.

Monday and Tuesday	10 A. M.	Arithmetic and Geometry.
	10.45	Astronomy.
Tuesday	4 P. M.	Disputations.
Wednesday	A. M.	Perfectd "theory."
	P. M.	Exercises in Style, Composition. Imitation, and Epitome, prose and verse. Greek.
Thursday	10 A. M.	Syriac.
	4 P. M.	Tristius (or Trostius), New Testament. Hebrew.
Friday	8 A. M.	Rhetoric.
	9 A. M.	Declamations. "Vacat rhetoricis studiis."
Saturday		Same as Freshmen.

This course of study was evidently determined largely by the humanistic influence. The major share of the program is given to the learned languages and their grammars, to rhetoric, and theological and philosophical disputations. There is almost nothing in the curriculum that would call for any preparation beyond a thorough training in the classics, and this, as we have seen, the admission requirements provided for amply. When the college course included no mathematics until the senior year, and then only the elements of arithmetic and geometry; when no science that could possibly presuppose a knowledge of mathematics was studied, except astronomy in the last year and physics for two fifteen-minute periods a week in the first year, we would scarcely expect to find a knowledge of mathematics or science required for admission, especially when the chief aim of the preparatory school was to fit boys for college. In those days the problem of articulation evidently took care of itself. There was perfect adjustment between the preparatory school and the college.

The most prominent subject among the requirements for admission was Latin; and that was a perfectly natural requisition at that time. The reason is to be found in the fact that in all higher institutions of learning, both in England and on the Continent, Latin was still the common language of scholars, a pre-eminence traceable back to the rise of the universities in the eleventh century. In discussing the customs of English universities during the seventeenth century Huber says: "We must not forget to advert to one ancient rule—the use of the Latin tongue, as enjoined by statute in all academic transactions."⁶ A like custom was prescribed by the statutes of Harvard as follows: Scholars shall, under no consideration, use their mother tongue within the limits of the college, unless summoned to deliver in English an oration or some other public exercise.⁷ A similar rule existed at Yale College until the Revo-

6. Huber, V. A., *English Universities*, II., 198.

7. "Scholares vernacula lingua intra Collegii limites nullo praetextu utantur, nisi ad orationem aut aliud aliquod exercitum publicum Anglice habendum evocati fuerint."—*Statuta Harvardini*, 13, 1642, 1655, 1685.

lution,⁸ but it is altogether unlikely, however, that the rule was uniformly enforced in either institution.⁹ The fact that such a clause did exist, however, and that there was some attempt to enforce it,¹⁰ explains sufficiently the injunction that on admission the candidate should be able to "make and *speake* true Latin." Latin was also an indispensable instrument for success in college studies; for theses, commencement parts,¹¹ disputa-

8. *Statutes of Yale College, 1726 to 1774*: "No scholar shall use ye englishe tongue in ye Colledge with his fellow scholars unless he be called to publick exercise proper to be attended in ye English tongue but schollars in their Chambers and when they are together shall talk lattin." This clause was stricken out in the code of 1774. There was a similar rule at Brown University.

9. In the *Memoirs of the Long Island Historical Society* there is a record of a visit to Harvard College on July 9, 1680. The students met there could hardly "speak a word of Latin." Vol. I., 384.

Also Eggleston, Edward, *The Transit of Civilization*, p. 215: "The attempt to compel conversation in Latin was not wholly successful in England, and it always failed in America, even in Harvard College." Here he quotes Danker's Journal, 385, for year 1689.

10 (a). Mr. Leonard Hoar, in a letter to his nephew, Josiah Flint, a freshman at Harvard, writes (March 27, 1661): "My charge of your choice of company I need not inculcate; nor I hope that for constant use of the Latin tongue in all your converse together, and that in the purest phrase of Terrence and Erasmus."—In Sibley, *Harvard Graduates*, I., 231.

(b). Michael Wigglesworth, in an entry in his diary, December 27-28, 1652 says: "Boldn to trangress ye colledge law in speak English."—Sibley, I., 267.

(c). As late as 1731 there was still an effort made to compel students to use Latin orally by the practice of announcing in Latin every Saturday at prayers the absences of the week and demanding excuses in Latin. The following are some of the answers: "Detentus ab amicis;" "tintinabulum non audivi." One freshman, charged with three offenses, replied: "Non ter, sed semel abfui: carolus frater locked me up in the buttery."—Thayer, *Historical Sketch*, p. 45.

11 (a). Regarding the use of Latin in theses and commencement parts, Thayer says: "Until 1760 the exercises, consisting of theses and disputations on various logical, grammatical, ethical, physical, and metaphysical topics, were conducted in Latin. In 1763 the first English oration was delivered."

(b). Judge Wingate, in a letter dated January 25, 1831, and addressed

tions, and some class room lectures,¹² as well as many of the books used by the students,¹³ especially in philosophy and theology, were written in Latin.

The aim of the grammar school of the seventeenth century was to prepare for college; the aim of the college was to supply the people with an enlightened clergy;¹⁴ the course of study was doubtless regarded a most efficient one for the purpose; a thorough grounding in the classics was an adequate preparation for the college course as it stood; in short, there was excellent adjustment all along the line. The admission requirements as stated remained without material change—on paper, at any rate—until 1734, and no new subject was introduced until the middle of the eighteenth century.

The college of William and Mary really falls within this period (1640-1700). The charter was granted in 1693, and it is claimed that the college was in existence as early as 1660 (*The History of the College of William and Mary*, J. Randolph & English, Richmond, 1874, p. 37). In 1705 the college, with the library and the records, was burned, and was not rebuilt until 1723. The earliest edition of the laws of William and Mary now extant is dated 1727. The only regulation for admission was that a boy must be fifteen years of age and have finished with the Latin and Greek of the grammar school, which at that time was a part

to Mr. Peirce, writes: "It is now thirty-five years since I have attended a commencement. . . I do not recollect now any part of the public exercises on Commencement day to be in English." Later he says: "I well remember that about the year 1757 or 1758 the exercise of the Forensic Disputation in English was introduced and required of the two senior classes, and I think likely that about the same time it became a part of Commencement exercises." This tallies quite well with the observation of Thayer cited above.

12. In the library of Yale University there is a manuscript copy of notes on lectures taken by Rector Pierson while a student at Harvard. Many of the lectures are in Latin.

13. A catalogue of the Harvard Library for 1723 contains a list of 250 books, and 65 per cent. of these bear Latin titles. Catalogue is printed with *A few notes concerning the records of Harvard College*, Andrew McFarland Davis.

14. "The number of students graduated at the college from its foundation to the presidency of Leverett (1707) was five hundred and thirty-one, one-half of whom became in after life clergymen."—Quincy, I., 192.

of the college. The requirements for admission were, evidently, then, about the same as at Harvard. It seems that there were never any definite entrance requirements at William and Mary. "In fact," says President Lyon G. Tyler, in a letter to the writer, "entrance examinations of any kind were not much considered in any of the Southern colleges." The only official statement I have been able to find concerning admission to William and Mary is in the statutes of the College of William and Mary, in Virginia, adopted June 24, 1727. These statutes are in the Congressional Library at Washington, and were copied by Dr. E. E. Brown. The statement regarding admission runs as follows: "Before they are promoted to the Philosophy School (the college) they . . . must first undergo an examination before the President and Masters . . . whether they have made due Progress in their Latin and Greek."

During the eighteenth century increased colonization, sectional pride, and sectarian differences led to the foundation of twenty-one colleges within the thirteen original States.¹⁵ Of these, however, only eight were established before the Revolution, and the history of these is that of a continual struggle with poverty, social turmoil, and religious contention. Consequently progress in higher education was seriously hampered. The most bitter religious controversy of the period was waged at Harvard College about the opening of the eighteenth century.

It has been stated before that no religious test ever appeared in the charter of Harvard College. And so long as the college was under the undisputed control of orthodox Calvinists, and so long as church membership was a prerequisite for citizenship, dissenters could be summarily disposed of.¹⁶ During the latter half of the seventeenth century, however, members of the Anglican church began to emigrate from England to the colony in considerable numbers, and their influence, together with that of a rapidly growing faction of liberals in the Puritan

15. From 1700 to 1800 there were twenty-one colleges founded in the United States. For complete list see *Education in the United States*, edited by Dr. Butler, p. 243.

16. President Dunster was dismissed from office in October, 1654, because he opposed the doctrine of infant baptism. See Thayer, *Historical Sketch*, p. 5.

church itself, was beginning effectually to leaven the long-congested lump of Calvinistic bigotry; and, toward the close of the century, neither colony nor college any longer wore the exclusive aspect of Puritanism.

The strict Calvinists were sorely tried by the growing tendency towards liberalism and began to fear for the fortunes of the college. Finally that clause of the royal charter of 1692 which made property instead of orthodoxy the qualification for the franchise¹⁷ caused the Calvinist leaders to realize that, as Quincy remarks, "the sceptre they had so long possessed had passed from their hands."¹⁸ When the Calvinists saw they were powerless to prevent the secularization of the state, they endeavored to save the college from drifting towards the devil.) Increase Mather, president from 1685 to 1701, who was as indefatigable in opposing liberalism as he was in burning witches, was especially anxious to have a religious test inserted in the college charter. When the attempt failed a bitter controversy, which had long been smoldering beneath the surface, broke out among the college officials; the result was the defeat of Mather and the overthrow of the influence of his belligerent faction. So keenly felt was the disappointment among the dethroned Calvinists that no terms of opprobrium were too bitter or too indelicate for their enemies. Rankling at the ignominy of defeat, the Mathers hurled scandalous accusations against their successful opponents. Governor Dudley was charged with "covetousness, lying, hypocrisy, treachery, bribery, Sabbath-breaking, robbery, and murder."¹⁹ John,—afterwards President,—Leverett and the Brattles were victims of even more scurrilous vituperation.²⁰

While this bitter struggle between orthodoxy and liberalism at Harvard was at its height a few zealous Calvinists, fearing

17. See *Charter granted by their majesties King William and Queen Mary to the inhabitants of the Province of the Massachusetts Bay in New England*, 1692, p. 7.

18. Quincy, *History of Harvard*; I., 65.

19. Thayer, *Historical Sketch of Harvard University*, p. 7.

20. For a more complete discussion of this controversy see Quincy, *History of Harvard University*, I., 53 to 67.

the advance of liberalism, were already taking steps toward the establishment of a "true school of the prophets" in Connecticut. They found further reason for such action, doubtless, on account of the growing population in the fertile Connecticut Valley, the establishment of Connecticut as an independent colony, the consequent distinct sectional interests, as well as the distance from Harvard College. On March 23, 1647, the town court of New Haven appointed a committee "to consider and reserve what lot they shall see meet and most commodious for a college, which they desire may be set up as soon as their ability will reach thereunto."²¹ In 1690 the question of founding a college in Connecticut was agitated again. In 1701 a charter was finally granted for the establishment of Yale College, where, as Thayer puts it, "the brimstone doctrines of Calvinism should not be quenched by the waters of liberalism."²² Thus the founding of Yale College was closely connected with the fortunes of Harvard.

Considering the close relationship between Harvard and Yale, it would necessarily follow that the courses of study would be similar. There are several instances among the early records of Yale College that indicate that the course of study pursued was simply an adaptation of the Harvard curriculum. It is enjoined in the laws of Yale College that "until they should provide further, the Rectors and Tutors should make use of the orders and institutions of Harvard College."²³ This naturally followed from the fact that all the first board of trustees but one, and all the earlier rectors and tutors, received their education at Harvard.²⁴

It was found that during the seventeenth century the requirements for admission to Harvard remained without any signifi-

21. *Records of Colony and Plantation*, p. 376; cited by Clewes in *Educational Legislation and Administration of the Colonial Governments*, p. 81.

22. Thayer, *Historical Sketch of Harvard University*, p. 6.

23. Cited by President Woolsey in *An Historical Discourse*. The same is also cited by Kingsley in *A Sketch of the History of Yale College in Connecticut*, College Collection of Pamphlets No. 77.

24. Cited by Woolsey in *Historical Discourses*.

cant change. Ability to read Tully or such like Latin author at sight, to write and speak good Latin, and to decline and parse Greek nouns and verbs and to read ordinary Greek, were the substance of the requirement. All the early records of Yale College prior to 1720 seem to be lost.²⁵ The earliest copies in the possession of the university are dated 1720 and 1726, and are transcriptions made by students at the time. The section on admission in the laws of 1720 is as follows:

"Orders and appointments to be observed in ye Collegiate School in Conneticott:

"Such as are admitted Students into ye Collegiate School shall in their examination in order thereunto be found expert in both ye latine and greek grammars, as also skilful in construing and grammatically resolving both latine and greek authors and in making good and true latin."

The regulations for admission in 1726, transcribed by Jonathan Ashley, then a freshman, are the same as in 1720. Moreover, "internal evidence," says Mr. Dexter, who is probably the best authority on Yale historical records, "shows that most of the provisions date back to a much earlier period; the use of the phrase, 'Collegiate School,' is especially to be noted."²⁶ Considering how slowly changes were made during the first century of higher education, it is safe to conclude that the regulations quoted were those in force at the founding of the college.

Compared with the requirements for admission to Harvard last quoted, the entrance requirements at Yale present nothing new and indicate only slight differences. In both colleges Latin

25. Possibly when the college was removed from Saybrook to New Haven, in 1716, the records became scattered or lost. The earliest known laws of the college belong to the years 1720 and 1726, and are in manuscript.—Woolsey, *Historical Discourse*.

During the first half of the eighteenth century "the laws to be observed by the undergraduates were not printed, but written out by each student at the time of his admission for his own use."—F. B. Dexter, *Yale Biographies and Annals*, I., 347. There is a rumor that an earlier copy than that of 1720 exists.

26. Dexter, *Yale Biographies and Annals*, I., 347.

and Greek were the only subjects required. At Harvard ability to speak Latin was required on paper, but, as we have concluded above, that requirement was probably a mere form. The only other difference is that the entrance terms at Harvard are more clearly specified. For instance, the candidate must be able to write Latin in both *prose* and *verse*; and the authors to be read are indicated—Tully, Virgil, the Greek Testament, Isocrates, and the minor poets. The similarity of the admission requirements doubtless follows from the similarity between the two institutions in both the aim and the curriculum.

In 1734 the laws of Harvard College were revised and a few slight changes in the requirements for admission resulted. The following were the new entrance terms:

“Whoever upon Examination by the President and two at least of the Tutors shall be found able to read, construe, and parse Tully, Virgil, or such like common classical Latin Authors: and to write true Latin in prose, and to be skilled in making Latin verse, or at least in the rules of Prosodia; and to read, construe, and parse ordinary Greek, as in the New Testament, Isocrates, or such like, and decline the paradigms of Greek nouns, and verbs . . . shall be looked upon as qualified for admission into Harvard College.”²⁷

The only change here is merely a verbal one—ability to “speake true latine” is omitted. Also a knowledge of the rules of prosodia would evidently be accepted in lieu of ability “in making Latin verse.” While this latter change seems insignificant, it may, on the other hand, mark a tendency toward memoriter rather than constructive work in the preparatory teaching. To learn the rules of prosodia would certainly require less original power in the use of Latin than to compose verse. In 1790 we also find ability to *translate* substituted for ability to *construe*. This change, together with the one mentioned above, distinctly indicates that, at Harvard at any rate, the importance of Latin as a living language had begun to de-

27. From a manuscript copy of laws by President Wadsworth.

cline.²⁸ For the remainder of the eighteenth century the requirements for admission to Harvard College remained unchanged.²⁹

The most significant addition to college admission requirements during the colonial period was mathematics to the extent of elementary arithmetic. This subject appeared for the first time among the subjects for entrance to Yale College established by the revised code of 1745.³⁰ Following are the entrance terms:

1701
"CONCERNING ADMISSION INTO COLLEGE."

"That none may expect to be admitted into this College unless upon Examination of the President and Tutors, They shall be found able Extempore to Read, Construe and Parce Tully, Virgil and the Greek Testament; and to write True Latin in Prose and to understand the Rules of Prosodia, and common Arithmetic, and Shall bring Sufficient Testimony of his Blameless and inoffensive Life."³¹

For the remainder of the century no mathematics beyond vulgar arithmetic was required for admission to any college; nor did Harvard include arithmetic until after 1800. Beyond this addition of arithmetic there was no material change among the requirements for entrance to Yale College until the next century, except that among the regulations for 1795 the rules of prosody were struck out, and the word *translate* was substituted for *construe*.³²

As we have suggested above, in the case of Harvard College,

28. About 1723 Cotton Mather suggested, among other "points needful to be inquired into relating to the education at Harvard College. . . Whether the speaking of Latin has not been so discountenanced as to render our scholars very unfit for a conversation with strangers."—Quincy, I., 558.

29. I have examined the statutes of 1743, 1778, 1790, and 1798.

30. Orders, as revised by a previous committee, were read and approved at the first meeting of the President and trustees (at Commencement, 1745).—From a manuscript in the college archives.

31. Manuscript in English, with signature of Thomas Clap.

32. I have examined the laws of 1748, 1755, 1759, 1764, 1774, 1787, 1795, 1800, 1808, 1811.

these same changes in the Latin requirement at Yale probably indicate a new attitude towards the subject.

From the founding of Yale College to that of the next colonial college there was an interim of over forty years. Perhaps the fire of Puritan fervor was burning low, or maybe those zealous colonists who founded Harvard, Yale, and the College of William and Mary, because they dreaded to "leave an illiterate ministry to the Churches," had a sufficient supply of spiritual leaders. Constant warfare with the Indians, also, doubtless had its influence. In 1746, however, Princeton College was founded on a strong Presbyterian basis. Although differing denominationally from the earlier colonial colleges, Princeton adopted substantially the same course of study. Consequently we find only a slight difference in the requirements for admission. The earliest statutes of the college, 1648, prescribe the following entrance terms:

"OF ADMISSION."

"None may Expect to be admitted into the College but such as being Examined by the President and Tutors, shall be found Able to Render Virgil and Tully's orations into English and to turn English into true and grammatical Latin: and be so well acquainted with the Greek as to render any part of the four Evangelists in that Language into Latin or English and to give the grammatical Construction of the words."³³

The plan of studies adopted at Princeton was doubtless borrowed largely from Harvard and Yale. The fact that the first three Presidents of the College of New Jersey were graduates of Yale makes it more likely that the Yale method was the controlling influence. The admission requirements above when compared with those of Yale College for 1745, except in the absence of arithmetic, will be found to correspond with them in nearly every particular. Since arithmetic appeared as an entrance requirement at Yale for the first time in 1745, it is probable that the new subject had not become sufficiently well estab-

33. From minutes of Trustees, November 9, 1748.

lished by 1748 to have a place among the requirements for admission to Princeton. It is likely, also, that President Burr, himself a graduate of Yale,³⁴ was influenced by earlier traditions. The more plausible explanation, however, is that for admission to college in the colonial days a good knowledge of the classics was fundamental, and it mattered little what else the candidate knew. Although nearly all colleges required arithmetic to some extent before the end of the period, yet a knowledge of that subject was often presupposed, and the candidate was frequently not examined in arithmetic at all. Arithmetic was added to the requirements for admission to Princeton for the first time in 1760 by the following vote of the Trustees: "Voted: that after the present year all who are admitted to the Freshman class shall be acquainted with Vulgar Arithmetic shall be considered as a necessary Term of their admission."³⁵ In 1794, however, arithmetic did not appear among the entrance terms. Whether the subject was dropped sooner or not there is no way of ascertaining. The records for that period are exceedingly meager. With Princeton in the maelstrom of the struggle for independence, there were more important concerns than keeping school or keeping records. For the omission of arithmetic from the list of entrance requirements in 1794 two explanations may be suggested: First, the relative unimportance of the subject as discussed above, and, second, the omission may have been a clerical error. The requirements for admission in 1813 were precisely the same (on paper) as in 1794, with the exception of this addition: "Arithmetic to the rule of three inclusive is also required." The only other changes in the requirements for admission to Princeton during the eighteenth century were that construing Latin and Greek was discontinued by the regulations of 1764, and Sallust and Cæsar's Commentaries were substituted for Tully's Orations in 1794.

34. He graduated from Yale College in 1735.—Dexter, *Yale Biographies and Annals*, I., 220.

35. Copied from the Minutes of the Trustees of Princeton College for 1760, by Mr. V. Lansing Collins, Reference Librarian.

Our discussion of the colonial period will close with the consideration of one more college, founded on different denominational and educational traditions from the other colleges which we have discussed. Columbia College, which existed for a quarter of a century as King's College, was founded in 1754.³⁶ The first code of the "Laws and Orders of the College of New York," as it was called, was adopted June 3, 1755. The following were the terms for admission:

"OF ADMISSION."

"None shall be admitted (unless by a particular Act of the Governors) but such as can read the first three of Tully's Select Orations and the Three first Books of Virgil's *Æneid* into English, and the Ten first Chapters of St. John's Gospel in Greek, into Latin and such as are well versed in all the rules of Clark's introduction so as to make true Grammatical Latin, and are expert in Arithmetic so far as the Rule of Reduction to be examined by the President as follows:"³⁷

Here we find the same admission subjects as at other colleges—Latin, Greek and Arithmetic. The requirements for admission to Columbia, however, differed from those of the other colonial colleges in one important feature. Columbia is the only college where we have found the amount required for entrance definitely stated until after the Revolution. During the war the activities of the college were practically suspended, no degrees were conferred from 1776 till 1786; and "with its president gone, its instructors scattered, its books and instruments stored or lost, the College had sunk to a very low ebb."³⁸ On May 1, 1784, the Legislature passed "An act for granting certain privileges to the college heretofore called King's College for altering the name and charter thereof, and erecting an

36. From 1754 to 1784.

37. The Statutes of Columbia College for the early period are in the custody of Mr. John B. Pine, of New York.

38. *History of Higher Education in New York*, U. S. Bureau of Education, Circ. of Inf., 1900, 139.

university within this State.”³⁹ By this act the former King’s College, which had become by this time practically defunct, received a new birth under the name of Columbia College; and the course of study was broadened and strengthened. The influence is seen in the immediate advance made in the terms of admission. The entrance requirements for 1785 were as follows:

“No candidate shall be admitted into the College, after the second Tuesday in April, 1786, unless he shall be able to render into English Cæsar’s Commentaries of the Gallic War; the four Orations of Cicero against Catiline; the four first books of Virgil’s *Æneid*; and the Gospels from the Greek; and to explain the government and connection of the words, and to turn English into grammatical Latin, and shall understand the four first rules of Arithmetic, with the rule of three.”⁴⁰

For the rest of the eighteenth century the requirements for admission to Columbia College remained practically unchanged.

Throughout the period we have been considering, or, at any rate, until the middle of the eighteenth century, progress in higher education among the colonies was very slow. The few colleges founded were established rather to maintain a safe supply of enlightened ministers than to extend the influence of general culture. In short, the colonial college had a narrow aim, and a consequent narrow curriculum that admitted few innovations. The education of the colonial college also was for a privileged class who desired humanistic culture, not for the common toilers, who needed useful knowledge for the practical affairs of life. After the Revolution social life assumed a new aspect. The narrow, bigoted autocracy of the church crumbled, and with the dawn of independence came democracy, which gave a firm footing for educational progress.

39. *Laws of the State of New York*, seventh session, chap. XLI., quoted in same article.

40. From a printed copy of the *Statutes of Columbia College*, in the custody of Mr. Pine.

In the development of admission requirements progress was likewise shown. There were three signs of progress: (1) A gradual increase in the Greek requirement incident on the diminished use of Latin, (2) the addition of arithmetic, and (3) a tendency, not yet common, however, for the entrance requirements to become quantitative and specific.

As we have before stated, the only Greek required for admission to Harvard College before 1700 was the elements of grammar and the translation of simple prose. During the eighteenth century there was a gradual increase in the amount of Greek required for admission to college, but it was not until the middle of the nineteenth century that the Greek requirement reached its maximum. The additional requirement in Greek during the first half of the eighteenth century is doubtless explained by the fact that less attention was being given to the use of Latin as the scholastic medium of expression, and more emphasis was consequently thrown upon the Greek.

Arithmetic as an entrance subject appeared for the first time at Yale in 1745, and soon followed among the other colleges except Harvard. This subject completed the formidable triad—Latin, Greek and Mathematics—which has evinced so much vitality amidst the assaults of the educational reformers of the century just closed. The presence of arithmetic among admission requirements is the earliest instance of an interesting tendency in the history of the curriculum of the secondary school. Nearly all of our present day admission subjects have gradually backed down and out of the college curriculum into that of the secondary school. History, science and modern languages were formerly college subjects strictly. In the seventeenth century the only preparation required in Greek was the elements of grammar and simple prose; by the middle of the eighteenth century Isocrates and the New Testament were among the admission subjects, and a century later Homer and Xenophon dropped below the threshold. In 1642 arithmetic and astronomy were senior studies at Harvard College, but nowadays the two last named subjects appear on nearly every secondary school program, while arithmetic has dropped

much lower. By this process nearly all the subjects in the curriculum of the colonial college, except the theological, philosophical subjects, and the Oriental languages, have long since been introduced to an equal extent in the secondary school. In fact, the curriculum of our secondary schools, particularly preparatory schools, has been patterned for the most part after that of the college, the difference being one of degree, not of kind.

The tendency during the latter part of the period for admission requirements to become specific and quantitative, first noted in the case of Columbia College, became general during the first decade or two of the nineteenth century. Several factors combined to bring about this tendency. First, the establishment of printing houses in America multiplied, popularized and cheapened books, so that it became possible for all who were preparing for college to have access to the same editions.⁴¹ Secondly, the growing interest in education and the rapid increase of students after the Revolution made more rigid specification both possible and necessary.⁴²

In the colonial period the colleges had practically two sources of supply. Boys were prepared either by private tutors or by the grammar or Latin schools. The tutors were usually the parish ministers; and a very common method of instruction was to walk with a pupil in the fields and converse in Latin about whatever objects attracted attention.⁴³ The Latin school was primarily an English institution. "The tide wave of zeal for founding new Latin schools reached its flood about the time that emigration to America began, and the impulse was felt in all the early colonies."⁴⁴ One such school was often

41. Dr. Chandler, in describing life at Yale in 1714, says: "There were no books in the country but such as were imported with the first settlers.—Chandler, *Life of Samuel Johnson, D. D.*, p. 8.

42. Between 1762 and 1776, inclusive, the number of graduates from Columbia was 87. On account of the war no degrees were conferred from 1776 till 1786. From 1786 till 1800, inclusive, the number of graduates rose to 211. Other colleges show a similar increase.

43. Bush, G. G., *Harvard, the First American University*, p. 21

44. Eggleston, E., *The Transit of Civilization*, 211.

connected with a colonial college; its sole aim was to train boys for the college; consequently the problem of closer articulation between the preparatory school and the college gave educators little concern in those days.⁴⁵

"When Schollars had so far profited at the grammar schoole" and were "judged ripe" they presented themselves for the entrance examination. The test was an oral one—in fact, we find no traces of written examinations before the middle of the nineteenth century—and was conducted by the president or tutors. The regulations for entrance were, however, very laxly enforced. Although fourteen years was the lowest age of admission ever permitted by the statutes of Yale College, there are several cases on record where boys as young as twelve or thirteen were entered.⁴⁶ Often, also, the candidate was not examined in all the subjects prescribed. When Mr. J. M. Sturtevant, later of Illinois College, entered Yale in 1822, he was examined in Latin and Greek only, although arithmetic was required. The following is an instance which occurred at Harvard: In May, 1780, John Dawson, from the College of William and Mary, craved admittance to Harvard, but he was

45. Grammar schools, at Harvard: "And by the side of the Colledge (is) a faire Grammar Schoole, for the training up of young schollars, and fitting of them for Academical Learning, that still as they are judged ripe, they may be received into the colledge of this Schoole."—*New England's First Fruits*, p. 1.

At Princeton: "There is a grammar-School annexed to the college, as a nursery for it, under the general inspection of the president."—*An Account of the College of New Jersey, Published by order of the Trustees*, supposed to be done by S. Blair; printed by James Parker, 1764.

At Columbia: "To the college is also annexed a grammar school."—In a paper written by President Cooper, quoted by F. R. Hathaway in *History of Columbia University*, U. S. Circ. of Inf., 1900.

46. The Rev. John Marsh, class of 1804, in a letter to George P. Fisher, states that he (Dr. Marsh) entered Yale at twelve years of age. (See *Life of Benjamin Silliman*, by Geo. P. Fisher, 1866.) Mr. Silliman entered college at the age of thirteen, while Charles Chauncey, a friend of Mr. Silliman, was admitted at the age of ten years, one month, but was kept out by his father until a year later. The laws of the period state that candidates for entrance must be at least fourteen years old.

not familiar with Greek, as the latter was not at that time a required subject at William and Mary.⁴⁷ He was permitted to enter the Sophomore class, however, and was "exempted from attending on the Instructions in the Greek Department."⁴⁸ There was evidently, then, a general laxity of enforcement of the stipulated regulations for admission, and the examination was apparently a flexible and informal affair.⁴⁹

The following is a comparative table of college admission requirements about the close of the eighteenth century. It has not been possible to secure reliable data from many institutions. The statistics included in the table represented the status of admission requirements in the final decade of the eighteenth century. The regulations are from the last issue of the laws prior to the year 1800.

From the table it appears that before 1800 there were only three subjects required for admission to college—Latin, Greek, and arithmetic. The requirements in Greek and in arithmetic were practically uniform; the same thing was true of Latin, except the fact that there was some diversity among the authors required, and "grammatical analysis of words," or the "government and connection of the words," or ability "to parse" sometimes appeared instead of "grammar." Uniformity was the striking characteristic of college admission requirements during the colonial period. First of all there was a uniform aim; secondly, there was a uniform course of study, with absolutely no flexibility; thirdly, the grammar school had a single purpose—to prepare for the college—and consequently the same

47. In 1779, under the direction of Thomas Jefferson, the chair of "Humanity," in which Greek was taught, was abolished, and was not restored until 1795. See correspondence between Lyon G. Tyler, President of William and Mary, and William G. Brown, of Harvard, in *Nation*, July 27, 1893.

48. Correspondence between the same men.—*Nation*, June 22, 1893.

49. A committee at Harvard, appointed for the improvement of classical study, reported in 1761 that they "find upon enquiry that the Students are not required to translate English into Latin nor Latin into English, neither in verse nor prose."—Peirce, *History of Harvard University*, 238.

conditions existed there. Uniformity in admission requirements was, therefore, a natural consequence.

(TABLE II)
COMPARATIVE TABLE OF COLLEGE ADMISSION
SUBJECTS FOR 1800

	LATIN	GREEK	MATHEMATICS
Harvard 1798	Tully Virgil Grammar and Prosody Composition	New Testament Grammar and Prosody	
Yale 1800	Tully Virgil Composition	Greek Testament	Rules of Vulgar Arithmetic
Princeton 1794	Sallust Cæsar Virgil Composition Gram. Analysis	Evangelists in the Greek Testa- ment Grammatical Analysis	Probably Arithmetic (See pp. 33 and 34)
Columbia 1786;	Cæsar Cicero's Orations against Cati- line Æneid (4 bks.) Composition Grammatical Construction	Gospels from the Greek Testa- ment Grammatical Construction	Arithmetic, including Rule of Three
Brown 1793	Cicero Virgil's Æneid Composition	Greek Testament	Rules of Vulgar Arithmetic
Williams ⁵⁰ 1795	Tully's Orations Virgil's Æneid Composition	Greek Testament	Rules of Vulgar Arithmetic

50. The term "grammar" appears in the requirements for admission to Williams College. The term may signify English grammar, but it probably meant Latin grammar; for English grammar was not required by any other college until a quarter of a century later (1819).

CHAPTER II

CONCERNING COLLEGE ADMISSION REQUIREMENTS DURING THE
NINETEENTH CENTURY

IN the last half of the eighteenth century there was a momentous change in the religious, social and political conditions in the country. In religion there developed a strong tendency towards liberalism and a consequent severance of the Church from the state; and with the development of political independence came democracy and a pretty general fusing of classes. Naturally new educational demands arose. There was a call for a higher education in subjects of practical value—"bread and butter studies"; the so-called "Great Awakening," stimulated by the zeal of Whitefield and Edwards during the first half of the eighteenth century, established new educational as well as religious standards, and demanded a class of ministers trained otherwise than in the subtleties of that humanistic discipline which was still the backbone of the colonial college. The colleges, however, were not immediately responsive to the new demands. They were too far removed from the common people, and too firmly bound in the fetters of tradition, to swerve from their long cherished aim and customs. The colonial college admitted scarcely a change, so far as its curriculum was concerned, until the middle of the nineteenth century. In fact, it is still with us. The demand for popular and useful studies was met, however, by the rise of a new class of institutions—the academies.¹ These schools became rather numerous about the beginning of the nineteenth century; their

1. Philadelphia Academy, probably the earliest, 1753; Phillips Andover, 1780; Phillips Exeter, 1780.—Brown, E. E., *Secondary Education*, Monograph No. 4, in *Education in the United States*. "At the close of the century New York had nineteen of these schools, and Massachusetts about an equal number."—Boone, *Education in the United States*, 72.

curricula were liberal and comprehensive, comprising most of the studies taught in the colleges and many others besides.² They taught Latin and Greek, and rivaled and often supplanted the grammar schools as preparatory schools for college.³ Since the academies placed more emphasis on English branches, sciences, geography, mathematics and history, they consequently influenced college admission requirements in those subjects; and, as we shall presently see, these studies were rapidly introduced as entrance subjects during the first half of the nineteenth century.

At the close of the eighteenth century the requirements for admission to college were, in general, ability to read, translate and construe grammatically Cicero's Orations, Virgil, Sallust, or Cæsar, and ordinary Greek, such as the Greek Testament, Isocrates, etc.; to write English into Latin, and, except at Harvard, a knowledge of the rules and processes of vulgar arithmetic. For Yale, Princeton, and Columbia the requirements remained practically unchanged till 1820, except that Columbia required more classics in 1811,⁴ and Yale made a slight advance in classics in 1817.⁵ At Harvard the requirements for admission, as prescribed by the statutes of 1807, show a decided advance over those of 1798, last cited, both in amount and definiteness. Below the section on admission is quoted in full:

2. The following were the studies taught in academies about 1800. I have been unable to find any uniform curriculum, for the practice varied in different academies; but, from a series of letters in Barnard's Journal, containing reminiscences of school days by famous men, and from William Winterbotham's contemporaneous account of schools in 1795, and that of Noah Webster, I have concluded that the average academic course comprised the following studies: The "three R's," English grammar, Latin, and Greek, geography, algebra, geometry, natural philosophy, astronomy, music, composition, oratory, bookkeeping, logic, and virtue.

3. "Next in importance to the grammar schools are the academies, in which, as well as in the grammar schools, young citizens are fitted for admission to the university."—Winterbotham, William, *American Schools and Education*, 1795; Barnard's *Am. Jr. of Ed.*, 24, 141.

4. All the *Æneid*, Dalzel's *Collectanea Græca Minora*, two books of Xenophon's *Cyropædia*, and two books of the *Iliad*.

5. Sallust, and Dalzel's *Collectanea Græca Minora*.

"No one shall be admitted, unless he be thoroughly acquainted with the Grammar of the Greek and Latin languages, in the various parts thereof, including Prosody—can properly construe and parse Greek and Latin authors—be well instructed in the following rules of Arithmetic, namely, Notation, simple and compound, Addition, Subtraction, Multiplication, and Division, together with Reduction and the single Rule of Three; have well studied a Compendium of Geography, can translate English into Latin correctly—and have a good moral character. Each candidate shall be examined in the Grammar of the Greek and Latin languages, and in any parts of the following Greek and Latin Books, with every part of which he must be acquainted, namely, Dalzel's *Collectanea Graeca Minora*, The Greek Testament, Virgil, Sallust and Cicero's Select Orations."

Here for the first time arithmetic appears among the list of subjects required for entrance to Harvard College, and the exact parts of the arithmetic are very precisely indicated. There is now no question that the requirements for admission were quantitative; that is to say, ability to read ordinary Latin and Greek was no longer sufficient, but each candidate must be prepared in a definite amount in certain prescribed books. There is also an increase in the amount of both Latin and Greek required for entrance—Sallust, and Dalzel's *Collectanea Graeca Minora*; also geography appears for the first time anywhere as an admission subject. The introduction of geography as a requirement for admission should not be construed as a recognition of science, or as a symptom of an increasing interest in scientific study. A knowledge of geography, particularly ancient geography, was required simply because it helped to a better understanding of the classics. For the same reason, it will be seen, ancient history found a place among entrance subjects a few years later. Geography, then, was the first of the newer sort of studies to find a place among admission requirements. Geography was also introduced at Princeton in 1819, at Columbia in 1821, at Yale in 1822, and in several other colleges before 1830.

We have mentioned the fact that English grammar may have been intended by *grammar* as an entrance term at Williams College in 1795. We are certain, however, that English grammar was required for admission to Princeton in 1819.⁶ The same subject was required at Yale in 1822, and at Columbia about 1860. [The laws of Harvard College for 1820 make another important addition to the list of subjects required for admission: "Algebra to the end of simple equations, comprehending also the doctrines of roots and powers, arithmetical and geometrical progression." Columbia followed with algebra in 1821, Yale in 1847, and Princeton in 1848.]

It should be borne in mind at this point that in this historical discussion we are primarily concerned with the development of requirements for admission to the academic course. For it was the introduction of what may be called *modern subjects*—geography, English, higher mathematics, history, natural science, etc.—alongside of the long cherished classical requirements of the arts course that made the problem of college entrance requirements such a complicated and troublesome affair during the last quarter of a century. Other, parallel courses of study began to be organized about the middle of the nineteenth century; these had their own peculiar admission requirements, uninfluenced by tradition. The earliest instance of the establishment of a parallel course was at Columbia in 1830, and it is interesting in this connection, because in the requirements for admission to this course French appeared for the first time as an entrance subject.⁷

6. Requirements for admission to Princeton, 1819: "No student shall be admitted into the freshmen or lowest class in this college, unless he be accurately acquainted with the grammar, including prosody, of both the Greek and Latin tongues; unless he be master of Cæsar's *Commentaries*, Sallust, select parts of Ovid's *Metamorphoses*, Virgil, the Oration of Cicero, contained in the volume in usum Delphini, the Evangelists of the Greek Testament, Murphy's *Lucian*, or Dalzel's *Collectanea Græca Minora*, the first three books of Xenophon's *Cyropædia*, and Mair's or Clark's *Introduction to the Making of Latin*; and unless he be well acquainted with arithmetic, English grammar, and geography."—*Laws* for 1819.

7. In 1830 a scientific and literary course was established at Columbia,

Thus far our attention has been confined to colleges which have been most influential in shaping the educational policy of the East. One of the first, and, perhaps, most influential, of the Western colleges was the University of Michigan. It has additional interest for us, also, because it was one of the earliest State colleges. The University of Michigan was opened in 1841 with six students. The following were the requirements for admission:⁸

"Geography, arithmetic, the elements of algebra, the grammar of the English, Latin and Greek languages, the exercise and reader of Andrews, Cornelius Nepos, Vita Washingtonii, Sallust, Cicero's Orations, Jacobs' Greek Reader, and the Evangelists."

The same subjects, it will be seen, were required for admission to the University of Michigan as in the Eastern colleges, namely: Greek, Latin, English grammar, geography, arithmetic, and the elements of algebra. At the University of Michigan, however, the amount of classics required for entrance was at first considerably less than in the other colleges discussed, because of the fact, perhaps, that Michigan was a new college, and was in a section of the country where opportunities for preparation were unequal to those offered in the longer settled parts of the country. The requirements for admission, however, were soon raised; and in 1847 the following respectable list appeared in the catalogue: "English Grammar, Geography, Arithmetic, Algebra through simple equations, Krebs' Guide for the writing of Latin, Latin Reader, Cornelius Nepos,

with a "view of rendering the benefits of education more generally accessible to the community." For admission to the course, in addition to other subjects, a grammatical knowledge of the French language and ability to translate Voltaire's *Histoire de Charles XII.*, or Bossuet's *Discours sur l'Histoire Universelle*, and to write the exercises in Levizac's grammar were required. The course did not appear to "find favor with the public," and was discontinued in 1843. *Statutes of Columbia College*, 1836 and 1843.

8. Farrand, E. M., *History of the University of Michigan*, p. 42. "The catalogue of 1843-44 is the earliest I find, and perhaps the earliest issued."—Librarian R. C. Davis, in a letter to the writer.

Cicero's Orations, Virgil's *Bucolics* and six books of the *Æneid*, Greek Reader through, Latin and Greek Grammar, Keightley's (or Pinnock's Goldsmith's) *Grecian History* to the time of Alexander the Great, and Roman to the time of the Empire." This shows that a considerable advance in the requirements for admission came with the thorough establishment and rapid growth of the university.⁹ With the addition of the "four Gospels," in Greek, in 1850, the requirements for admission to the University of Michigan were about equal to those in the Eastern colleges. Being unhampered by tradition, Michigan from the first was able to introduce among its entrance requirements subjects which had been slowly working into the older colleges for a hundred years.

[In 1844 candidates for admission to Harvard College were examined by the mathematical department in the following subjects: "In Davies' and Lacroix's *Arithmetic*, Euler's *Algebra* or Davies' *First Lessons in Algebra* to the Extraction of the Square Root, and an Introduction to Geometry and the Science of Form, prepared from the most approved Prussian Text Books; to VII. Of Proportions." Here we find not only an advance in the amount of algebra required for admission, but geometry for the first time required. Geometry was also made an entrance subject at Yale in 1856, at Princeton, Michigan and Cornell in 1868, and at Columbia in 1870. History as an admission requirement was first introduced at Harvard College in 1847.¹⁰ History was also added at Michigan the same year,¹¹ and at Cornell in 1868. The requirement in history was still further extended by the addition of United States history at the University of Michigan in 1870, due doubtless to the increased feeling of patriotism in the North after the close of the Civil War. The same year physical

9. In 1847 there were 89 students in the University of Michigan, against 7 in 1841.

10. In the *Catalogue* for 1846-47, Worcester's *Elements of History* (Ancient History) is required for admission.

11. "Grecian History to the Time of Alexander the Great, and Roman to the time of the Empire."—*Catalogue*, 1846-47.

geography was made a requirement for admission to both Harvard and Michigan.

This running account of the introduction of new subjects as requirements for admission to college has aimed to show both when and where these subjects were first introduced, and also how rapidly they were added. In 1800 there were only three subjects required for admission to any college in the United States—Latin, Greek, and arithmetic. Between 1800 and 1870 eight new subjects found a place among admission requirements—geography, English grammar, algebra, geometry, ancient history, physical geography, English composition, and United States history. In other words, in less than seventy years eight new entrance subjects were introduced, whereas during the century and a half prior to 1800 the only addition of any consequence was elementary arithmetic.

Besides the continual addition of new subjects, between 1800 and 1870 there was a gradual but substantial increase in the amount of Latin and Greek required for admission. Not only was the requirement in the original authors—Tully, Virgil, and the Greek Testament—increased, but new authors were added. Dalzel's *Collectanea Græca Minora* was introduced at Harvard in 1807, at Columbia in 1811, at Yale in 1817, and at Princeton in 1819; in 1825 Jacobs' Greek Reader was substituted for Dalzel at Harvard, in 1827 at Columbia, in 1829 at Yale, and as an alternative for Dalzel at Princeton in 1832; two books of Xenophon's *Cyropædia* were required at Columbia in 1811, three books of the same classic at Princeton in 1819; in 1811, also, Columbia required two books of the *Iliad*, three books in 1821; and Harvard added three books of Homer in 1860 as an alternative for part of the reader; both Columbia and Yale added three books of the *Anabasis* in 1848, Columbia dropping the *Cyropædia*. By 1865 the Greek Testament or selections therefrom had ceased to be a required subject for admission to the colleges under consideration, and a reader, Jacobs', Bullion's, Colton's, or Felton's, and the *Anabasis* or the *Iliad* had been substituted.

The changes in the Latin requirements were not so frequent

or so numerous as in the case of the Greek. The Greek Testament had held its place for two centuries, more because of its religious character than because of the superior quality of the language. And when the Greek Testament began to be less used as an admission subject, profane authors, naturally, were promptly substituted. In 1800 the only Latin authors required were Cicero, Virgil, Sallust, and Cæsar. These continued, with some fluctuations in amount, as the staple authors until 1870. By that time, however, Cæsar, or additional reading in Cicero, was beginning to supplant Sallust, because of the fact, probably, that the philosophical character of the latter and its peculiarities in style rendered it less suitable for preparatory students.¹² Besides the three constants, as they may be termed—Cicero, Virgil and Cæsar—other authors were added to, and occasionally substituted for, portions of these. Select parts of Ovid's *Metamorphoses* were introduced at Princeton in 1819, with no reduction, however, in the other authors. At Columbia, also, five books of Livy were introduced in 1821, with a slight reduction in the amount of Cæsar, Cicero, and Virgil; and *Viri Romæ* was added in 1865. During this period, also, the amount of arithmetic was constantly increased until, by 1870, arithmetic complete with the metric system of weights and measures was the common requisition.

The year 1870, or thereabouts, marks a natural transition in the history of college admission requirements. At this time the old colonial college, with its mediæval traditions, its single degree, and its homogeneous course of study, was rapidly evolving into the modern university. Students who had left college as boys at the outbreak of the Rebellion returned men,

12. "In substituting Cæsar for Sallust (which was formerly required) the Faculty have been influenced by a desire to introduce Sallust into the college course, from which, from the philosophical character of its views, and the peculiarity of its style, they apprehend it to be better suited than to the preparatory course, and also by a wish that any time gained by the substitution of an easier for a more difficult author should be devoted to the acquisition of a more thorough acquaintance with syntax and prosody, and to the practice of writing Latin."—*Catalogue of Harvard University*, 1836-37.

Elective system
no longer amenable to the old-fashioned disciplines. The elective system, the largest and most significant movement in the history of higher education during the last half century, had set in firmly, particularly at the larger colleges. About this time, also, English, modern languages, and science began to gain a footing among admission requirements. Also parallel courses, leading to semi-classical degrees, with alternate sets of entrance conditions, were being established in most colleges. The date 1870 also marked at Harvard University the beginning of a new and progressive régime, which has given a powerful impulse to higher education in the United States, and has been the source of some of the sanest and most influential educational ideas. At this point, therefore, we shall pause for a short summary. The status of college admission requirements at 1870 can be represented most conveniently by introducing the regulations for admission to the A. B. course from the catalogues of six leading colleges. The sections quoted are from the catalogues for 1869-70. They appear below as footnotes.¹³

" HARVARD.

Candidates for admission to the Freshman class are examined as follows:

LATIN.

In the whole of Virgil.

The whole of Cæsar's Commentaries.

The Orations of Cicero, included in Folsom's, Johnson's, or Stuart's edition (Folsom's edition of 1859 contains eleven speeches).

Latin Grammar, including Prosody.

And in writing Latin.

GREEK.

In Felton's Greek Reader.

Or the whole of the Anabasis of Xenophon; and the first three books of Homer's Iliad (omitting the Catalogue of Ships in the second book); Greek Grammar, including Prosody, and in writing Greek, with the accents.

Real equivalents will be received for any of the books named above, or for parts of them.

MATHEMATICS.

In Arithmetic, (including the Metric System of Weights and Measures, added in 1868).

For the purpose of a more ready comparison, the requirements for admission to Harvard, Yale, Princeton, Columbia,

The elements of Algebra, as far as through Quadratic Equations. (Advance made in 1868.)

Elementary Plane Geometry, including so much as is contained in the first XIII chapters of Professor Peirce's Treatise, and (after 1870) in the *use* of Logarithms.

HISTORY AND GEOGRAPHY.

In the elements of Physical Geography (introduced in 1870).

In Ancient and Modern Geography.

In the historical and geographical notices found in the required Greek and Latin text-books.

And in Smith's *Smaller History of Greece*, or Sewell's *History of Greece*.

ENGLISH (INTRODUCED IN 1866).

Students are also required to be examined, as early as possible after their admission, in reading English. Prizes will be awarded for excellence. For 1870 students may prepare themselves in Craik's *English of Shakespeare* (Julius Cæsar), or in Milton's *Comus*. Attention to derivations and Critical Analysis is recommended.

YALE.

Candidates for admission to the Freshman Class are examined in the following books and subjects:

Latin Grammar, including Prosody.

Sallust—Jugurthine War, or four books of Cæsar.

Cicero—Seven Orations.

Virgil—The *Bucolics*, *Georgics*, and first six books of the *Æneid*.

Arnold's *Latin Prose Composition*, to the Passive voice (first XII chapters).

Greek Grammar—Including Prosody.

Xenophon—*Anabasis*, first three books.

Greek Reader—Jacobs, Colton, or Felton.

In place of the Greek Reader the candidate is at liberty to offer the last four books of Xenophon's *Anabasis* or four books of Homer's *Iliad*.

Higher Arithmetic—Including the metric system of weights and measures.

Day's Algebra, to Quadratic Equations.

Playfair's *Euclid*—first two books (introduced in 1856).

The first, third, and fourth books of Davies' *Legendre Elements of*

Michigan, and Cornell have been arranged in the form of a comparative table, which appears further on. A careful study of Geometry, or of Loomis' Elements of Geometry, may be offered as a substitute for Playfair's Euclid.

English Grammar and Geography, a thorough knowledge of which will be required.

PRINCETON.

Candidates for admission to the Freshman, or lowest, class are examined in the following books and subjects:

ENGLISH.

English Grammar: Orthography, Punctuation, Short and Simple English Composition, Geography, Ancient and Modern.

LATIN.

Latin Grammar (including Prosody), Cæsar (five books of Commentaries), Sallust (Catiline or Jugurtha), Virgil (Eclogues and six books of the Æneid), Cicero's select Orations (six), Arnold's Prose Composition (twelve chapters).

GREEK.

Greek Grammar, Greek Reader (Bullion's or Felton's), Xenophon (three books of the Anabasis), Arnold's Greek Prose Composition (twelve exercises).

MATHEMATICS.

Arithmetic, Algebra (to Quadratic Equations), Geometry (first book of Euclid or an equivalent).

COLUMBIA.

Applicants for admission to the Freshman Class are examined in the English, Latin, and Greek Grammars, Greek and Latin Prosody and Composition, Ancient and Modern Geography, Arithmetic, Algebra as far as the end of simple equations, and the following books, or their equivalents, in the Latin and Greek languages, viz: De viris illustribus urbis Romæ, Cæsar's Commentaries de Bello Gallico, the whole six books of Virgil's Æneid, six orations of Cicero, the selections from Lucian in Jacobs' Greek Reader, three books of Xenophon's Anabasis, and two books of Homer's Iliad.

After October, 1869, the requisitions for admission to the Freshman class will embrace four books of Legendre's Geometry, and a knowledge of the Metric System of Weights and measures and moneys, in addition to the foregoing.

the table will show that (1) Harvard required the largest amount of Latin for admission in 1870; (2) Harvard also required the

CORNELL UNIVERSITY.*

All candidates, no matter what may be the course of study they intend to pursue, must pass a thoroughly satisfactory examination in the following subjects: (1) Geography, (2) English Grammar, including Orthography and Syntax, (3) Arithmetic and Algebra to Quadratic Equations.

Candidates intending to pursue the Course in Arts must be prepared, in addition to the foregoing, to undergo an examination in the following mathematical and classical studies: 1. *Mathematics*—Plane Geometry 2. *Latin*—Grammar, including Prosody; writing Latin (McClintock's First Latin Book, or fifty exercises in Arnold's Latin Prose Composition); the whole of Cæsar's Commentaries on the Gallic War; the whole of Virgil's *Æneid* (Frieze's edition); Cicero's Select Orations (Johnson's edition); Roman History (the first half of Smith's *Smaller History*). 3. *Greek*—Kendrick's Greek Ollendorf; the etymology of either Hadley's or Curtius' Greek Grammar; one book of Homer; three books of Xenophon's *Anabasis* (or Jacobs', Felton's, Colton's, or Owen's Greek Reader), and Greek History (the first ten chapters of Smith's *Smaller History*). In Latin and Greek equivalents to the list here given will be accepted.

UNIVERSITY OF MICHIGAN.

CLASSICAL COURSE.

Candidates for this course will be examined in the following studies:

1. English Grammar—Orthography, Etymology, Syntax, and Prosody.
2. Geography—General facts of Physical Geography, the Political Geography of Europe and the United States, and Ancient Geography, particularly that of Italy, Greece and Asia Minor.
3. History—An outline of Roman History, from the foundation of the city to the battle of Actium; of Grecian History from the beginning of the Persian War to the death of Alexander, and of the History of the United States to the close of the Revolutionary War (added in 1869).
4. Mathematics—*Arithmetic*, Fundamental Rules, Fractions, common

* Cornell University was founded in 1868, but the admission requirements, above quoted, are the same as in 1868.

I have also examined the catalogues of several of the smaller colleges, such as Amherst, Dartmouth, Brown, Syracuse, Union, etc., and find the conditions for admission about the same as in the case of the larger colleges, except the amount required is usually less.

most Greek, although Yale and Princeton required nearly as much;¹⁴ (3) Harvard demanded the fullest preparation in mathematics; while (4) at Princeton, in 1870, there was apparently the earliest serious attempt to make English composition a definite requisition. The lowest requirements in the classics, particularly in Greek, were at the University of Michigan; but this was compensated, perhaps, by United States history and physical geography. The following year, however, physical geography was required for entrance to Harvard. The appearance of the latter subject as an entrance requirement is a symptom of the modern scientific tendency, which has had such a controlling influence in the field of education since the middle of the nineteenth century. In fact, within six years (in 1876) physics found its way among the admission subjects at Harvard. In 1825 only the simplest elements of text-book chemistry, natural history, and natural philosophy were studied at Harvard College; but within twenty-five years every regular student at Harvard was pursuing some branch of science.

and decimal, Compound Numbers, Percentage, Proportion, Involution and Evolution.

Algebra,—to Quadratic Equations:

Geometry,—the first four books of Davies' Legendre, including the problems, or an equivalent in other authors.

5. Latin—*Latin Grammar*, four books of Cæsar's Commentaries; six Select Orations of Cicero; six books of the Æneid, with special reference to the Prosody; Harkness' Introduction to Latin Composition, from page 50 to page 166; or forty-four exercises in Arnold's Latin Prose Composition.

6. Greek—*Greek Grammar*; three books of Xenophon's Anabasis; Arnold's Greek Prose Composition, with special reference to writing with the accents, and to the general principles of syntax. Three chapters of Boise's Prose Composition, based on the first book of the Anabasis, are recommended as a substitute for the last fifteen exercises of Arnold's Composition.

14. The candidate for admission to Harvard who offered the Anabasis entire instead of the reader would be prepared on about 325 pages; without the Anabasis, about 226 pages; while at Yale the requirement would likewise be 280 or 270 pages, and at Princeton 280 pages.

(TABLE III)

COMPARATIVE TABLE OF COLLEGE ADMISSION SUBJECTS FOR 1870

COLLEGE	LATIN	GREEK	MATHEMATICS	HISTORY AND GEOG.	ENGLISH
Harvard,	Virgil—entire Cæsar—entire Cicero—select (11) Grammar and Composition	Felton's Reader or Anabasis, en- tire, and Homer, 3 bks. Grammar and Composition	Arithmetic with Metric System. Algebra, through quadratic equa- tions Plane Geometry	History of Greece and Rome. Ancient and Modern Geo- graphy. Elements of Physical Geography	Reading English
Yale	Virgil—Æneid, 6 Bucolics and Georgics Cicero—7 Orations Sallust—Jugur- thine War or Cæsar—4 bks. Grammar and Composition	Reader—Felton or equivalent. Ana- basis—3; or, in- stead of reader, Anab., last 4, or Iliad, 4	Arithmetic with Metric System Algebra to quad- ratics Geometry. Play- fair—2 books	Geography	English Grammar
Princeton	Virgil—6, and Ec- logues Cicero—6 Orations Cæsar—5, Sallust, Cat. or Jug. Grammar and Composition	Reader—Felton or Bullion. Anabasis, 3 bks. Grammar and Composition	Arithmetic Algebra to quad- ratics Geometry—1 bk.	Geography, Ancient and Modern	English Grammar Orthography, Punc- tuation, Short and simple Composition
Columbia	Virgil—Æneid, 6 bks. Cicero—6 Orations Cæsar—entire Viri Romæ Grammar and Composition	Reader—Select- tions from Lucian in Jacobs. Anaba- sis, 3 bks. Iliad— 2 bks. Grammar and Composition	Arithmetic Algebra to end of simple equations Geometry (after 1869)—4 bks. of Le- gendre	Geography, Ancient and Modern	English Grammar
Michigan University	Virgil—Æneid, 6 bks. Cicero—6 Orations Cæsar—4 bks. Grammar and Composition	Anabasis—3 bks. Grammar and Composition	Arithmetic Algebra to quad- ratics Geometry, Legen- dre—4 books	Roman and Greek History. U. S. His- tory, to close of Rev- olution. Ancient & Modern Geography. Physical Geography	English Grammar
Cornell	Virgil—Æneid— entire Cicero—6 Orations Cæsar—entire Grammar and Composition	Homer—1 bk. Anabasis—3 bks., or Felton's Greek Reader	Arithmetic Algebra to quad- ratics Plane Geometry	Roman and Greek History Geography	English Grammar

When this table for 1870 is compared with the one for 1800 the changes in college requirements that occurred during the first seventy years of the nineteenth century are plainly evident. First, the original requirements of Latin, Greek, and arithmetic increased substantially in amount. Secondly, the range of authors extended, and greater liberty of substitution was permitted. Thirdly, the amount to be read in preparation for college became very definitely specified. And, fourthly, the number of entrance subjects was more than doubled. In 1870 there was a fair degree of uniformity in the subjects for admission, but there was nothing like uniformity in the amount required.

The tendencies in the development of admission requirements during the last thirty years have been the same ones that were prominent in 1870; that is, towards an increase in the number of subjects, an increase in amount required, greater exactness, and, most prominent of all, towards greater freedom of option. In 1870 the number of different subjects required for admission to college was six: Latin, Greek, mathematics, history, geography, and English (composition and grammar).¹⁵ Of the six colleges thus far discussed, Harvard, Cornell, and Michigan were the only ones requiring all six subjects for entrance. From 1870 to 1900 the new subjects that have made their way into the list of admission requirements are modern languages, English literature and composition, and natural science, descriptive and experimental.¹⁶

It seems astonishing, in view of the valuable literatures in the German and the French languages, and of their service to scholars, that no college until 1875 regarded a knowledge of either one of these languages a necessary study for admission. In fact, modern languages are comparatively recent additions to the college curriculum. After the Revolution, as the result, doubtless, of the friendly relations between this country and France, the French language broke out sporadically among

15. See table, p. 53.

16. Of twelve other colleges whose catalogues for 1870-71 I have examined none required any subject other than these for admission to the A. B. course.

the colleges. French was introduced at Columbia in 1779, at William and Mary about the same time under the influence of Thomas Jefferson, at Williams College in 1793; and at Harvard extra instruction in French was provided for in 1787, and in 1790 Juniors were permitted to substitute French for Hebrew.¹⁷ Modern languages, however, gained headway very slowly, and whatever recognition they did receive was due simply to their practical or ornamental value. They were never bolstered up, as the classics have been, by the questionable theory of formal discipline. In fact, the modern languages were not generally regarded seriously until the middle of the nineteenth century.¹⁸

Attention has already been called to the fact that French was required at Columbia College in 1830 for admission to the "Literary and Scientific course."¹⁹ The first time French could be offered for admission to the full classical course was at Harvard in 1871.²⁰ In 1875 a knowledge of either elementary French or

17. Harvard College *Statutes* for 1790 state that all students under twenty-one, presenting certificates from their parents, might be excused from Hebrew, but must take French.

18. The following extract from the Harvard College *Laws* of 1814 indicates that French was not early held in high repute: "Students may attend the French Instructor at times not interfering with College exercises."

19. See note 7, p. 43.

20. "An examination in the translation of French prose will be held at the beginning of the Freshman year; those Students who pass this examination satisfactorily will not be required to study French in the College course."—*Harvard Catalogue*, 1870-1871.

The following statement also appears in the *Catalogue* of Yale College for 1875-76:

"Each student is required to pass an examination in the elements of either the French or the German language, before entering (in the Junior year) on the advanced study of the one of those languages which he shall elect to pursue. An opportunity is given for passing this examination at the same time with the other examinations for admission; other opportunities will be given at the beginning of the Sophomore and Junior years.

"In French the requirements are, the rules and forms of Part I. of Otto's Grammar (omitting the exercises), and two chapters of Fenelon's *Telemaque*."

German was required of all candidates for admission.²¹ Elementary French has been required for admission to Yale since 1885, to Columbia since 1891, to Princeton since 1893, and to Cornell since 1877 for all courses except the classical course, and since 1897 for admission to the classical course. Before French was required for admission to college, however, this language had already received considerable attention among the first class secondary schools, especially in the East.²² German as an entrance subject has had about the same history as French, and has usually been accepted as a substitute. So conservative is education, and so enslaved have our colleges been to tradition, that as late as 1897 only 60 of the 432 colleges reporting a classical course required any modern language for admission, while 402 institutions required Latin, and 318 Greek.²³

The study which has been most seriously neglected in our colleges until a very recent date is English. During the colonial period the English used even by recognized scholars was lamentably bad. Anybody who has had occasion to examine the manuscript laws and other documents of the early colleges will testify to that fact. Some of the extracts in this dissertation illustrate the cheerful freedom in spelling, capitalization, and punctuation which then existed. The long neglect of the English language is probably due to three causes: First, the English language and literature, in comparison to the classics, is relatively new; secondly, the indefiniteness of the language and the lack of any common standards have made English difficult to teach; and, thirdly, culture and training in the classics have so long been synonymous terms in the minds of the learned

21. "The translation at sight of easy French prose, or of easy German prose, if the candidate prefer to offer German. Proficiency in elementary grammar will be accepted as an offset for some deficiency in translation."—*Harvard University Catalogue* for 1874-1875.

22. In the Report of the President of Harvard University for 1872-73 the following statement appears: "Already about one half of the students come to college qualified to pass such an examination" (in French or German).

23. *Report of the U. S. Commissioner of Education* for 1896-1897, p. 467.

that any considerable attention to the mother tongue was regarded as almost a dissipation of energy. Both in England and America educated men evidently proceeded on the theory that a requisite facility in the use of the vernacular would come, somehow or other, from experience, general reading, or, best of all, from the translation of a sufficient quantity of Latin and Greek.

As late as 1870 we found that a rudimentary knowledge of English grammar was generally regarded as an adequate preparation in English for the college course. English literature naturally did not appear as an admission subject until the same subject had become well established in the college course. The catalogue of the Yale College library for 1743 classified the works of Shakespeare, Spenser, and Pope as "Books of diversion."²⁴ English literature was of little consequence as a college study until the middle of the nineteenth century.²⁵ We have stated above that the first advance in English as an entrance subject, beyond the elements of grammar, was made by Princeton in 1870 by the requirement of "short and simple English composition." Princeton required nothing further in English, however, for fifteen years. Harvard required English composition in 1874, Columbia and Cornell in 1882, Michigan in 1878, and Yale, with characteristic conservatism, in 1894. Instead of composition several colleges have required a knowledge of some text-book on rhetoric.²⁶

Rhetoric as a separate subject, however, has generally been

24. Schwab, J. B., *The Yale College Curriculum*.—*Educational Review*, June 12, 1901.

25. In the year 1851-52 lectures on the English language and literature were introduced in the first half of the senior year at Harvard University. In 1857 readings in English literature became part of the sophomore course in rhetoric.

26 (a). At Princeton, 1884, Rhetoric—Subject of sentences in Hart's or Kellogg's Rhetoric.

(b) The catalogue of the University of Michigan from 1874 to 1878 prescribed the following requirements in rhetoric: "Hart's Composition and Rhetoric, with special attention to Chapter I., Part I., on Punctuation and Capitals, and to Chapters VIII. and IX., Part II., on Proof-Reading, and on the Study of the English Language."

discontinued by colleges that have adopted the uniform requirements in English. At present the usual requirement in English for admission to college is the knowledge of certain classics in both English and American literature; some of the works are to be read carefully and others to be studied minutely. The candidate's mastery of the subject is tested by questions on the subject-matter, literary form, structure, etc., of the books assigned for careful study, and by the composition of a few paragraphs on several topics chosen from the others. Exercise books are frequently accepted as partial evidence of preparation. The idea in its simplest form originated at Harvard in 1874. The catalogue of Harvard University for 1873-74 makes the following entrance requirement in English:

"Each candidate will be required to write a short English Composition, correct in spelling, punctuation, grammar, and expression, the subject to be taken from such works of standard authors as shall be announced from time to time. The subject for 1874 will be taken from one of the following works: Shakespeare's *Tempest*, *Julius Cæsar*, the *Merchant of Venice*; Goldsmith's *Vicar of Wakefield*; Scott's *Ivanhoe*, and *Lay of the Last Minstrel*." This method continued at Harvard, the list of books being changed slightly and increasing each year until 1895, when the following works were required:

Shakespeare's *Merchant of Venice* and *Twelfth Night*, Milton's *L'Allegro*, *Il Penseroso*, *Comus*, and *Lycidas*, Longfellow's *Evangeline*, the *Sir Roger de Coverley Papers* in the *Spectator*, Macaulay's *Essays on Milton and Addison*, Webster's first *Bunker Hill Oration*, Irving's *Sketch Book*, Scott's *Abbot*. The amount of reading thus prescribed is about twice that of 1874. Since 1896 Harvard has followed the uniform requirements of the New England Commission of Colleges and Preparatory Schools. The University of Michigan adopted in 1878 a plan similar to that of Harvard in 1874. A candidate's qualification in English was determined by a composition on some subject selected from one of the following works:

Shakespeare's *Julius Cæsar* or *Tempest*, Scott's *Old Mortality* or *Kenilworth*, Dickens' *Christmas Stories*. In 1883

Cornell University based the examination in English on a similar list of four classics. Princeton began by requiring in 1885 an essay on Cooper, in 1886 on Irving or Goldsmith, in 1887 on Franklin or Scott, and in 1892 the requisition was extended to four books. Columbia adopted a similar scheme in 1891, and Yale in 1894. The following, in brief, is an outline of the history of English as a college admission subject: English grammar, introduced at Princeton in 1819; composition, as an independent subject, Princeton, 1870; rhetoric, Michigan, 1873; literature, Harvard, 1874. By 1897 the plan of the New England Commission of Colleges and Preparatory Schools had been pretty generally adopted by the leading colleges in the United States, 80 of 432 institutions giving an A. B. course having adopted it.

Next to English in importance the various studies classed as physical and natural sciences have been added to the list of college admission subjects since 1870. The earliest of these subjects was physical geography, introduced at Harvard in 1870, and at Michigan the same year.²⁷ This subject, if it could be regarded at that time as a branch of science, was certainly still in the descriptive stage. It was usually included as a part of general geography, and was probably not at that time differentiated from the latter subject, which had been a requirement for admission since 1807. The introduction of physical geography, however, may be considered an indication of the influence of the scientific movement on admission requirements. The history of natural science as an entrance subject may be said properly to begin with the introduction of natural philosophy as a term of admission to Syracuse University in 1873.²⁸ In 1876 candidates for the classical course at Harvard were required to pass an examination in one of the following subjects:

27. At Harvard, "The elements of Physical Geography." At Michigan, "General facts of Physical Geography."

28. In 1872, however, "Elementary Mechanics (as much as is contained in Snowball and Lund's Cambridge Course of Natural Philosophy)" was accepted as a partial substitute for the maximum requirement in Latin and Greek for admission to Harvard College.

(1) Elementary botany, (2) rudiments of physics and of chemistry, (3) rudiments of physics and of descriptive astronomy. Cornell required of all candidates for admission as early as 1877 a knowledge of physiology; this may be regarded as another recognition of science.²⁹ The University of Michigan required natural philosophy and botany in 1890.³⁰ It must be mentioned in this connection, however, that a school of science, now the Lawrence Scientific School, was founded at Harvard University in 1847, and that the elements of physics or chemistry were required for admission to certain special courses in science somewhat earlier than these subjects were required for admission to the classical course. In the same year, also, the Sheffield Scientific School was established at Yale, and in 1873 the John C. Green School of Science was founded at Princeton. Here, however, we meet the anomalous situation of two advanced schools of science requiring not even the rudiments of science for admission to a scientific course. As late as 1888 the John C. Green School, while requiring no science for entrance, regarded five books of Cæsar and four orations of Cicero of more importance, and the Sheffield Scientific School required no natural science at all until 1895, when the elements of botany were prescribed. At the same time, however, four books of Cæsar and three of Virgil were required for entrance to the Sheffield Scientific School. There are two reasons which give a plausible explanation of this fact: The first is that the idea still prevailed that the so-called mental discipline which came from a thorough drill in the classics and in mathematics afforded as adequate a preparation for the pursuit of a scientific course as for anything else. The second is that elementary science was not thoroughly taught then in the preparatory schools, and a good training in the classics and mathematics was preferable to a weak preparation in science. Unfortunately this last argument still applies in many cases. According to the report of Presi-

29. Dalton's, Huxley and Youman's, or Cutter's preferred.

30. In Philosophy: Avery's or Gage's *Elements of Physics*; in Botany: twenty-seven chapters of Gray's *Lessons*, or First and Second Parts of Wood's *Class Book*.

Science

dent Eliot, as late as 1887 the science work in the preparatory schools was in a deplorable state.³¹ Much of the blame, however, for the persistence of bad methods of preparatory science teaching belonged to the colleges. President Eliot recognized this fact in discussing the policy of colleges in requiring certain text-books in science for preparation. He said: "No valuable training in experimental science was thereby introduced into the secondary schools; the scientific subject was committed to memory just as if it had been history or grammar; and the professors in the scientific department were the most strenuous in protesting that the requirement in science did more harm than good."³² In response to this report Harvard University set an example for other colleges, and likewise initiated a movement which has revolutionized the methods of science teaching in the secondary schools, by requiring for admission in 1887 a "course of experiments in the subjects of mechanics, sound, light, heat, and electricity, not less than forty in number, actually performed at school by the pupil." By 1897 there were nearly three times as many colleges that required physics for admission to the A. B. course as there were that required a modern language. Chemistry, botany, astronomy, physiography, etc., may be regarded under the general subject, sciences, and do not call for separate treatment.

Since 1870 the new subjects that have been added to the list of college admission requirements are English literature, French, and German, and physical and natural science. Before 1800 college entrance requirements comprised only two subjects—the classics, and mathematics in its most elementary form. Since 1800 the requirements have been extended into all fields of knowledge, comprising even manual and industrial branches. The distinctly new subjects that have appeared in response to nineteenth century demands, and hand in hand with the general advance in education, are: Higher mathematics, science, (de-

31. *The Annual Report of the President of Harvard University for 1886-87*, p. 11 et seq.

32. *The Annual Report of the President of Harvard University for 1886-87*, p. 9.

scriptive and experimental), history, English (grammar, composition, and literature), and modern languages (French, German, and Spanish). In the following table all the subjects that have been required for admission to the A. B. course since the opening of Harvard College in 1638 are arranged in the order of their introduction. The date opposite each subject is as nearly correct as it is possible to get it with the data at my command.

TABLE IV.

TABLE SHOWING THE CHRONOLOGICAL ORDER OF THE INTRODUCTION
COLLEGE ENTRANCE SUBJECTS.*

SUBJECT.	DATE.	COLLEGE.
Latin and Greek	1640	Harvard.
Arithmetic	1745	Yale.
Geography	1807	Harvard.
English Grammar	1819	Princeton.
Algebra	1820	Harvard.
Geometry	1844	Harvard.
Ancient History	1847	Harvard and Michigan.
Modern History (U. S.)	1869	Michigan.
Physical Geography	1870	Michigan and Harvard.
English Composition	1870	Princeton.
Physical Science	1872	Harvard.
English Literature	1874	Harvard.
Modern Language	1875	Harvard.

Not any college, of course, actually requires of every candidate for entrance all the subjects included in the table. A

* At Leland Stanford, Jr., University even industrial subjects, such as wood-working, forge-work, foundry-work, and machine-shop work, were accepted last year in part fulfillment of the requirements for admission to the A. B. course.

These dates have been determined from statements in the laws and catalogues of the colleges mentioned. They may not indicate the actual first appearance of each subject as an admission requirement. They show when the movement started in the leading colleges. For instance, we know that composition was a part of the entrance examination in English grammar in some colleges before the year 1870. The year 1870 the rather indicates when composition became a separate subject, and received special attention.

knowledge of arithmetic, English grammar, and descriptive geography is generally presupposed; and these subjects no longer stand as distinct requirements except in the case of a few of the smaller colleges. With the growth of the elective system considerable flexibility in admission requirements has developed; so that in nearly all the larger colleges absolute prescription is no longer in vogue. This phase of the subject, however, will be discussed at length in a subsequent chapter.

Besides the addition of new subjects, during the last thirty years there have been constant changes in the original admission subjects. In Latin and Greek new authors have been substituted for the original ones, and the range of classical literature offered the candidate is wider. In both the classics and in mathematics there have been changes in the amount required for admission to college, as well as in the character of the requisition. In 1870 we found that the classical authors commonly required were, in Latin, Virgil—the *Æneid*, *Eclogues*, and *Georgics*; Cicero—selected orations; Cæsar—the *Commentaries on the Gallic War*; Sallust—*Catiline's Conspiracy* and the *Jugurthine War*, and the *Viri Romæ*; in Greek, a reader—Felton, Bullion, Jacobs, etc.; Xenophon—the *Anabasis* and *Cyropedia*, and Homer. Since 1870 the standard authors have still been, in Latin—Cæsar, Cicero, and Virgil; and in Greek—the *Anabasis*, and Homer. Other authors, however, have appeared from time to time in addition to these or as a substitute for parts of them. Ovid's *Metamorphoses*, which seems to have been required for the first time by Princeton in 1819, during the last thirty years has become commonly accepted in lieu of a part of Virgil. In 1882 Yale substituted 2500 lines of Ovid for the *Georgics*; and Michigan in 1883 accepted 1200 lines of Ovid for the last two books of the *Æneid*; Princeton in 1894 made 2500 lines of the *Metamorphoses* part of the requirement in Latin poetry; other colleges have made a similar substitution of a certain amount of Ovid, usually for some portion of Virgil. The requirement in Ovid has commonly amounted to 2500 verses, and Virgil has been correspondingly reduced to six books of the *Æneid* and the *Eclogues*. In a like

manner parts of Sallust, usually the Catiline, or Jugurthine War, or both, have frequently been substituted for a similar amount of Cæsar. Other works in Latin that have had a place among admission subjects are miscellaneous collections, like Allen's Reader, and some of the second-year Latin books which have been accepted for Cæsar during the last five years; also selections from Nepos, Viri Romæ and from minor Latin authors have found favor. In both Latin and Greek a tendency during the last thirty years has been to extend the range of works from which the candidate may select, rather than to require a stipulated amount in certain authors.

Together with the widening of the range of authors and the consequent flexibility in the requirements came a change in the character of the requisition in the classics. In 1874 Harvard required in Latin "the translation at sight of some passage in prose." In 1881 both Yale and Cornell made short passages for sight translation a part of the examination in Latin. Columbia did likewise in 1891, Princeton in 1894, and Michigan in 1895. In 1878, after a complete revision of admission requirements, Harvard permitted the candidate to take an examination in "the translation at sight of easy passages of Xenophon" (suited to the proficiency of those who had read four books of the Anabasis), instead of requiring him to read a specified amount in any author; and in 1887, after another complete revision of the regulations for admission, the elementary examination in Greek consisted simply in "the translation at sight of simple Attic prose (with questions on the usual forms and ordinary constructions of the language)," and in Latin, "the translation at sight of simple prose (with questions as in Greek)." A common practice among leading colleges now is to indicate in the catalogue some passage on which candidates will be given a very searching test (say, the first and second books of the Anabasis), and then to examine the candidate's ability to translate at sight ordinary classical prose. The amount which it is desirable for the student in the preparatory school to read is

usually indicated.³³ The reason for this change of method is tersely stated in the catalogue of the University of Michigan: "It should be remembered that the university desires *mastery of Latin*; the choice of selections studied is of secondary importance."³⁴ These two tendencies which have just been discussed—the extension in the range of authors, and the growing emphasis on sight translation—have revolutionized both the aim and methods of the teaching of classics in the preparatory school. The aim means a mastery of the subject, and this calls for a wider and more varied range of reading, better teaching, and effectually defeats the old-time custom of cramming up for the entrance examination.

The changes in the classical authors since 1870, as well as the revolution in methods of admission, have rendered the quantitative element in the original subjects both a less important factor and one very difficult to determine. In general it may be said that, in the case of colleges which still require both Latin and Greek for admission, the amount of the requirement in those languages has increased slightly. Few of the leading colleges any longer prescribe a definite amount of Latin and Greek. It is customary to prescribe a definite portion of certain authors to be studied minutely and to indicate the amount of reading in addition (say, 130 pages) that a student should do in order to pass the sight translation. To compute the average amount of Latin and Greek required by colleges in 1870 and again in 1900, and to arrive at a comparison that would be strictly accurate mathematically, is a very complicated task. It has been deemed sufficiently accurate for our purposes, however, to calculate the amount in the classics required for admission to eight prominent colleges with the ordinary text-book page as the unit. The results are approximately these: The amount of Latin which a student must,

33. At Columbia and Cornell 130 pages of standard prose, and at Harvard from 130 to 170 pages, is the amount suggested to the candidate preparing to pass the Greek examination.

34. *Calendar of the University of Michigan* (p. 41) for 1894-95, and subsequent issues.

on the average, read for entrance to college in 1900 is a trifle less than that in 1870; the amount of Greek is somewhat more; the amount in the classics, provided a candidate offers both subjects, has remained nearly constant. In view of the fact, however, that the examination in the classics is of a different character from that in 1870, the student preparing for college to-day probably reads more Latin and Greek than did the student thirty years ago. In the note below a table appears showing some interesting statistics in support of this statement. The number of pages in every case has been computed from the quantitative statements in the various catalogues. The text-books actually used in 1870 by the students preparing for college are taken as the basis.³⁴

Other admission subjects commonly required thirty years ago were mathematics and history. The advance in these subjects has been very conspicuous and significant. An examination of the catalogues of eleven representative colleges for 1870 reveals the fact that only two of the institutions

34.

TABLE V.

TABLE SHOWING THE AVERAGE AMOUNT OF LATIN AND GREEK REQUIRED FOR ADMISSION TO COLLEGE IN 1870 AND IN 1900.

AMT. OF LATIN AND GREEK IN 1870.			AMT. OF LATIN AND GREEK IN 1900.		
	LATIN	GREEK		LATIN	GREEK
Yale	329 pp.	216 pp.	Yale	391 pp.	193 pp.
Princeton	356 "	252 "	Princeton	331 "	193 "
Columbia	455 "	176 "	Columbia	391 "	188 "
Cornell	465 "	110 "	Cornell	350 "	188 "
Michigan	253 "	85 "	Michigan	304 "	143 "
Brown	465 "	118 "	Brown	319 "	193 "
Williams	395 "	142 "	Williams	339 "	193 "
California	253 "	85 "	California	252 "	193 "
Total	2971 "	1184 "	Total	2678 "	1484 "
Average	371 "	148 "	Average	335 "	185 "
In both languages	519 "		In both languages	520 "	

Approximately the same results are secured by the following table. These statistics were collected by the United States Bureau of Educa-

required algebra beyond quadratic equations; but algebra to quadratics was the usual requirement.³⁵ In 1900 all the eleven colleges required algebra at least through quadratic equations. In 1870 only two of the colleges required all of plane geometry, while in 1900 all required plane geometry and several, more in addition. Only five of these colleges required any history for admission in 1870, while all require considerable of history in 1900. Again, thirty years ago only three of the colleges required anything beyond a very meager amount of

tion in 1897 from nearly 500 colleges. Books have been converted into pages.

COLLEGES REQUIRING CÆSAR						CICERO						VIRGIL					
4 or more books	3 books	2 books	Gate to Cæsar	Amount Not specified		6 or more orations	5 orations	4 orations	3 orations	2 orations	1 oration	Letters	Not specified		6 or more books	5 books	4 books
180	27	19	8	140		117	23	36	8	9	3	8	84		136	9	22
4 or more books, the ordinary amount						6 or more orations, the ordinary amount						6 or more books, the ordinary amount. Average amount of Latin in pages, 320+					
															14	9	2
																	65

COLLEGES REQUIRING ANABASIS						ILIAD					
4 or more books	3 books	2 books	1 book	Not specified		3 books	2 books	1 book	Not specified	4 or more books, the ordinary amount in Anabasis	
98	56	25	23	84		99	21	1	32	3 books, the ordinary amount in Iliad	
										Average amount of Greek in pages, 193+	

By the first table the average amount of classics required in 1900 was 520 pages. By the second table (including a large number of cases in 1897) the average amount was 513 pages; probably more than 513 pages would be correct in this computation.

35. Harvard, Yale, Princeton, Columbia, Michigan, Cornell, Brown, Williams, Syracuse, Oberlin, California.

Greek and Roman history, but now Greek, Roman, United States, English, general history, and civil government are represented.

During the last thirty years the tendencies in the development of college admission requirements that were prominent up to 1870 have continued. The addition of new subjects has widened the range of entrance requirements. The amount required in the original subjects has increased. In mathematics, history, English, and science the advance has been considerable, while even the classical requirement has increased slightly. Colleges which still require both Latin and Greek for admission not only require more in these languages, but considerably more in mathematics, history, and English, as well as a modern language and, perhaps, some branch of science. This continued advance in entrance requirements is due, of course, in general, to the rapid development of higher education and the constant broadening of the field of knowledge; but what has influenced admission requirements most has been the gradual transformation of the American college into the American university. In order to meet the demand for advanced study and research the college has constantly pushed the work of a distinctly secondary character into the preparatory school. This movement has been accelerated also by the increased popular demand for advanced studies in what is sometimes called the "people's college," the public high school; for that institution is at home, is easily accessible, and is free. A third tendency, which belongs more strictly to the method of the entrance examination than to the subjects, is that examinations are becoming tests of power rather than of the mere acquisition of facts. Instances of this tendency are the emphasis placed on sight translation in the language examinations, the growing importance of English composition, of the solution of original problems in geometry, and of independent experimental work in science.³⁶ As the result of this

36. Original problems in geometry and experimental work in science are part of the examination for admission to Harvard, Yale, Columbia, Cornell, Leland Stanford, and several other leading colleges.

latter tendency in college admission requirements there has been a significant revolution in preparatory school methods of teaching, a shifting of the emphasis from stultifying memoriter work to that more quickening sort which calls for independent thought and constructive ability. In the teaching of foreign languages the actual use of the language and wide reading in its literature have supplanted much of the old-time exhaustive study of formal grammar; and the study of science has moved from the library to the laboratory.

80
17

PART II

COLLEGE ADMISSION REQUIREMENTS AS A PROBLEM IN EDUCATIONAL ADMINIS- TRATION

INTRODUCTION

HAD the American college remained substantially as we found it at the opening of the nineteenth century, had the preparatory school continued to be the Latin-school of the colonial period, the articulation between secondary and higher education in the United States would probably never have caused any difficulty; in short, college admission requirements would never have become a serious and perplexing problem. The economic advancement which followed the establishment of independence, and the subsequent opening up of the great West, made imperative a broader, more elastic and more practical sort of education than the colonial college had been accustomed to furnish. There was a call naturally for men trained to meet the problems incident on the development of the resources of a virgin country. This object, however, was not comprehended in the original aim and narrow curriculum of the college; and there is plenty of evidence which indicates dissatisfaction with the then prevailing college course, as well as a strenuous demand for something more practical. Mr. Kingsley described the general feeling as follows: "So great was this clamor, and such was the state of feeling developed in many sections of the country, that some of the younger and weaker institutions of learning were yielding to the pressure brought to bear upon them, and making the changes which were so loudly demanded."¹ Most of the older colleges, however, for a long

1 (a). Kingsley, W. L., *Yale College, A Sketch of Its History*, I., 133.

1 (b). In 1826-27 there was a serious opposition to the study of "dead languages" voiced by the newspapers of the day and by many

time remained conservative and held tenaciously to the curriculum of tradition. There was, consequently, a gradual and marked decrease in the number of college students during the second and third quarters of the nineteenth century;² and, on the other hand, academies, and a new sort of institution, public high schools, flourished, because they met "the practical wants of the times."³ The high school had the additional advantage of being free, at home, and under complete public control.

The growth of public high schools has been one of the remarkable features in the development of education in the United States during the nineteenth century. The Boston English High School was established as an experiment in 1821; Philadelphia followed with a high school in 1838, Providence in 1843, and Hartford in 1847.⁴ By 1860, according to Dr. Harris, there were about forty high schools in the country, in 1870 four times as many, and nearly 800 in 1880.⁵ The high school gradually usurped the general character of the academy, leaving the latter more strictly a

so-called educational reformers. Demands were made that the course of studies be altered to suit the "practical wants of the times." Yale College yielded to popular demand so far only as to submit the matter of dispensing with the classics to a committee consisting of Governor Tomlinson, President Day, Dr. Chapin, Hon. Noyes Darling, and Rev. Abel McEwen. The committee reported to the Corporation in September, 1828, that no change was expedient. Baldwin, *Annals of Yale College*, p. 168 *et seq.*

2. President Barnard, of Columbia, presented in his report for 1870 statistics which showed that the proportion of college students in the United States to the whole white population had decreased constantly for thirty years: 1:1549 to 1:2546—*Annual Report of the President of Columbia College*, 1870, p. 58.

3. Academies "differ from the colleges in permitting to their pupils the largest freedom of choice in the selection of their studies, and in limiting attendance to no determined period of years . . . have all the characteristics of the ordinary college, with the elective system added."—*American Journal of Education*, 22, 444.

4. Brown, E. E., *Secondary Education*, Monograph No. 4, 18, in *Education in the United States*, I.

5. Harris, W. T., *Proceedings of the National Educational Association*, 1901, 174.

preparatory school. "The earliest high schools were intended specifically for those who were not preparing for college. But there soon appeared a disposition on the part of the public school authorities to close up this gap. Studies regarded as distinctly preparatory to college were from time to time introduced into high school courses."⁶ Consequently the high school came to have a twofold aim—to prepare for college and to prepare immediately for practical life. The two aims could not harmonize because of the peculiar requirements of the college. The American college was as yet but a mediæval institution, emphasizing, for the most part, formal studies and theory. As we have shown above, the college needed students; but as their old-fashioned entrance gate was so narrow, only a very small percentage of high-school graduates could squeeze through. And ~~our~~ historical discussion has clearly demonstrated that admission requirements, both in the number of subjects and in amount, ~~have constantly increased.~~ *grew & are growing even* The bridge from the public high school to the college became more and more difficult to cross, so long, at any rate, as the colleges adhered to their stringent and inflexible requirements for admission. Consequently there was a well-nigh insuperable gap between a large element in the high school and the college. To bridge this gap has been the problem with which the college has had to wrestle for the last fifty years. In fact, the salvation of both the colleges and the schools depends on a close articulation between the two systems. *integration* *This then is not purely*

The attempts at adjustment fall under three general types, and, accordingly, the problem will be discussed under three heads; these may be regarded as corollaries to the main problem: I. Attempts to secure flexibility in admission requirements. II. Different methods of admission. III. Attempts to secure uniformity.

6. Brown, E. E., *Monograph on secondary education*, 22.

*Can does
here
an agree*

CHAPTER III

FLEXIBILITY IN ADMISSION REQUIREMENTS.

BEFORE the beginning of the nineteenth century there was almost no flexibility in the college course. By the middle of the century, however, the general demand for more studies of a practical nature, and the constant extension of the field of knowledge, particularly in the realm of science, made some degree of elasticity imperative. Consequently the elective system developed rapidly, especially in the larger and more prosperous colleges;¹ but, like nearly all educational reforms, it grew from the top downward, and became firmly established only in the last two or three years of the college course. The elective system in the college, therefore, at first influenced admission requirements but slightly. The influence came from another source, and that was upward from the high schools and academies.

When high schools began to assume the function of preparatory schools two fairly distinct courses developed—the one, the regular classical-preparatory course, and the other, a non-classical, Latin-scientific, Latin-English or English course. The task of the colleges was to provide means of ingress for graduates of this latter course, as well as for others who, being privately or irregularly prepared, had not enjoyed

1. The following elective studies were offered in Harvard University in 1841:

Sophomore year—Mathematics, Greek, Latin, natural history, civil history, chemistry, geology, geography, the use of the globes, and any modern language.

Junior year—The same as those of the Sophomore year and a more extended course in psychology and ethics.

Senior year—Political ethics, a more extended course in physics, and any of the elective studies above.

—*Report of the President of Harvard College, 1883-84.* p. 13.

the privilege of a complete preparation in Latin and Greek. This they have done in three ways, and in the following historical order: (1) by throwing open certain courses to special students qualified to pursue them; (2) by forming two or more distinct courses with as many degrees; (3) by allowing liberal option in the requirements for admission to the A. B. course. So-called "special courses" were introduced very early in some of the larger colleges; and they have always proved of genuine service to earnest young men and a hindrance to others.²

The earliest instance of a college course distinct from the regular classical course was at Columbia in 1830.³ Its institution was a definite attempt to meet the popular demand for a higher practical education. As the statutory enactment says, the course was established with a "view of rendering the benefits of education more generally accessible to the community."⁴ This course was termed the *Scientific and Literary Course*. It comprised three years of study, and a testimonial was given to students on the completion of it. The requirements for admission were as follows: "No student shall be admitted into the lowest class of the literary and scientific course without a grammatical knowledge of the French language, to be manifested by translations from Voltaire's *Histoire de Charles XII.*, or Bossuet's *Discours sur l'Histoire Universelle*, and by his ability to write the exercises in Levizac's Grammar, nor without the mathematical and geographical knowledge required for admission into the Freshman class."⁵

2. As early as 1826 Harvard College threw open certain courses of study to special and irregularly prepared students.—*Catalogue*, 1825-26, p. 20.

3. Reference has been made to this course before. See note 7, on page 43.

4. The advocates of the new course affirmed that the colleges were "chiefly designed to prepare young men for what are termed the learned professions," and were unsuited to supply the want "throughout the country of some more general, more liberal, more *practical* instruction than could at present be attained."—Moore, *An Historical Sketch of Columbia College*, pp. 90-91.

5. *Statutes of Columbia College*, 1836.

This course was never very popular, and it was discontinued in 1843. "There was not a single student engaged in it at this time, and during the last two years there had been, in all, but four."⁶ The fact was, it came about two decades too soon.

A scientific course was also established at Union College in 1833 under President Nott, one of the earliest advocates of the elective system. Until 1853 this course was the same as the classical course until the end of the freshman year, and there was but one set of requirements for admission—Latin, Greek, Mathematics, etc. In 1854, however, the two courses were differentiated from the beginning of the freshman year. The candidate for admission to the scientific course had to "be *thoroughly* prepared in English Grammar and the other usual elementary studies, and be quite familiar with practical arithmetic, as found in Davies' 'University,' or its full equivalent."⁷ The instances just discussed are two of the earlier attempts made by colleges to bring their resources within the reach of students who had not enjoyed the full classical preparation.

The tendency to form parallel semi-classical courses became general during the two decades between 1850 and 1870. The following table shows when ten of the leading colleges in the United States established courses other than the classical, and the degrees which accompanied them. The dates indicate when degrees were affixed to these courses. In several colleges, for instance, Harvard, Yale, Brown, the courses were established several years before the degrees were added.

The following table will show that, whereas, before 1850 there was practically one degree and one course in our colleges, and one gate into them, within two decades most of the leading colleges in the United States carried at least two distinct courses and had two or more avenues of approach.

6. Moore, *Historical Sketch of Columbia College*, p. 101.

7. *Catalogue of Union College*, 1854.

TABLE VI.

TABLE SHOWING WHERE PARALLEL COURSES DEVELOPED.

COLLEGE.	DATE.	DEGREE.
Brown	1851	Ph. B.
Harvard *	1851	B. S.
Yale †	1852	Ph. B.
Dartmouth	1852	B. S.
Rochester	1852	B. S.
Michigan	1853	B. S.
Columbia	1864	Ph. B.
Amherst	1872	Ph. B., B. S.
Cornell ‡	1868	B. S.
Princeton	1873	B. S.

* Lawrence Scientific School.

† Sheffield Scientific School.

‡ At opening of the College.

At first the only distinction between courses was that between the classical course, on the one hand, and the not-classical course on the other. Distinctions soon multiplied rapidly, however, and different titles and degrees were affixed to courses which in point of fact were differentiated but slightly. In 1880 the University of Michigan maintained five distinct courses—A. B., Ph. B., B. S., B. L., and C. E. In 1875 Cornell offered nine different courses leading to degrees, four general and five technical. By 1890, however, most colleges offered about three fairly distinct courses: (1) A full classical course leading to the degree of Bachelor of Arts, (2) a semi-classical course leading to the degree of Bachelor of Philosophy or of Letters, and (3) a more strictly scientific course with the degree of Bachelor of Science. We are especially concerned with these.

The requirements for admission to the non-classical courses have fluctuated and varied quite as much as in the case of the full classical course. It would be an endless task to follow out all the changes that have occurred in the different colleges in the requirements for admission to these various courses during the last half century. Certain distinct types will be considered.

The Ph. B. course has not always meant the same in all col-

leges. For instance, in Columbia and Yale it was at first the strictly scientific course;⁸ while at Brown, Cornell, and Michigan it has always been a semi-classical or general course. Since we are interested primarily in the effects of college admission requirements on secondary schools, we shall not discuss the contents of these courses, but shall confine our comparison of them to their respective entrance conditions.

Our point of view is that of the preparatory school. What the Ph. B. course means to the secondary schools can be represented best by the subjoined comparative table of requirements for admission. The statistics are from the catalogues of the colleges for 1899-1900.

This table illustrates the woeful lack of uniformity in the entrance requirements for the Ph. B. course. These five institutions are together only in that each requires some language, mathematics, history, English, and no Greek. Further, there is nothing but perplexing diversity in the entrance conditions. Brown requires no science, arithmetic is mentioned by two, trigonometry by one, and there are all varieties of science. In the subjects which all five colleges require—language, mathematics, history, and English—there is a wide variation in amount. The more colleges we consider the greater we find this diversity in the entrance requirements for the Ph. B. course. This lack of uniformity is of course due to the fact that there has never been any agreement on the part of colleges as to what the Ph. B. degree should stand for. It has always meant something different from A. B.; but that difference has ranged all the way from a course of study differing from the classical course only in the omission of Greek to an almost purely scientific and technical course. This indefiniteness has always made the philosophical course of a very uncertain and fluctuating character, has brought it into disrepute in many places, and has increased the difficulties for preparatory schools.

8. At Columbia it was the course in the School of Mines until 1893. At Yale Ph. B. is still the degree of the general course of the Sheffield Scientific School.

(TABLE VII)

COMPARATIVE TABLE OF REQUIREMENTS FOR ADMISSION TO PH. B. COURSE

COURSE	YALE	MICHIGAN	BROWN†	SYRACUSE	OBERLIN
LANGUAGE	Latin: Cæsar, 4 Virgil, 3, or Cicero, 5 French or German, Elementary	Latin: Cæsar, 4 Cicero, 6 Virgil, 9 French or German, El.*	Latin: Cæsar, 4 Cicero, 5 Virgil, 6 Ovid, 200 l. French or German, El. ‡	Latin: Cæsar, 4 Cicero, 6 Virgil, 6† French or German, Advanced, or French and Ger- man, El.	Latin: Cæsar, 4 Cicero, 6 Virgil, 6 French or German, El. and Advanced
MATHEMATICS	Algebra, El. and Adv. Geometry, Plane, Solid and Spher. Trigonometry and Logarithms	Algebra, through Quadratics Geometry, Plane and Solid	Algebra, through Quadratics Geometry, Plane	Algebra, through Quadratics Geometry, Plane Arithmetic	Algebra, including Logarithms Geometry, Plane and Solid Arithmetic
HISTORY	United States His- tory English History	General History	Greek and Roman, or English and United States	Greek and Roman United States	Civics and three sorts of History to be chosen from seven branches
ENGLISH	Requirements of Commission of New England Colleges English Grammar	Requirements of New England Commission Grammar	Requirements of New England Commission	Requirements of New England Commission Grammar	Requirements of New England Commission Grammar
SCIENCE	Elementary Botany or Physics or Chemistry	Elementary Physics and Botany	No science	Any two of follow- ing: Physical Geog. Physics Physiology Botany Chemistry Zoology	El. Physics, Chem- Biol., Bot. or Zool. or three of follow- ing: El. Physics, Phys. Geog., Phy- siology, El. Botany, El. Biology, El. Chemistry, and El. Astronomy

* Also another group with two years less of Language, but Chemistry and United States History.

† An increase in these requirements has been announced, to take place in 1903.

‡ For maximum of Latin a minimum (Cæsar, 3) or both French and German are accepted.

Two other courses designed to meet the needs of students who had not enjoyed a complete preparation in the classics are the Bachelor of Letters course (B. L.) and the Bachelor of Science (B. S.) course (general). These courses were doubtless intended primarily for graduates of the so-called English course of the high school.⁹ Again, colleges have agreed no better as to what these degrees should represent than in the case of the Ph. B.

A course of study leading to the degree of Bachelor of Literature was instituted at Cornell in 1871. This course differed little from the Ph. B. course which had been maintained since the founding of the university. The Cornell Register for 1868-69 described the Ph. B. course in the following words: "It differs from the Course in Science in comprising a somewhat smaller amount of scientific studies; on the other hand, it differs from the Course in Arts in omitting the Greek language, the modern languages being substituted in its place." The B. L. course, which, in fact, supplanted the Ph. B. course from 1871 to 1875, is described in the Cornell Register for 1872-73 in the following statement: "It differs from the Course in Science in comprising something less in scientific subjects and mathematics, and is characterized by a larger amount of attention to the Modern Languages and General Literature." The requirements for admission to the course in Literature in 1872-73, also, were the same as those for the Course in Philosophy in 1868-69; that is, the same entrance terms as for the classical course, with the exception of Greek. In 1874-75 the Course in Philosophy was revived with the following description: "This is designed to be a scientific course of a higher grade than the preceding (B. S. course)." The requirements for admission, however, were the same as for the B. L. course. In 1885 another change was made. The degree

9. The prefatory note to the *Calendar* of the University of Michigan for 1878-79 has the following statement: "Provision is made for admitting students who have completed the so-called English course of our Michigan High Schools, or one of equal value, to studies which lead to the attainment of Bachelor of Letters."

of B. L. was called Bachelor of Letters, rather than Bachelor of Literature, and the requirements for admission were the same as for the B. S. course.¹⁰ In place of Latin one of the following subjects might be offered: French, German, or advanced mathematics; in 1890 two of these subjects were required, and in 1893 Latin—four books of Cæsar, or an equivalent, and grammar—was added to this list. For the Ph. B. course, however, Latin was still required to the same extent as for the classical course. The following table will show readily how the four general courses were related in 1889 as regards admission requirements. Arithmetic, geography, grammar, physiology, elementary algebra, and plane geometry were required of all for any course.

TABLE VIII.

SHOWING HOW THE FOUR GENERAL COURSES AT CORNELL WERE RELATED IN 1889.

"R" MEANS REQUIRED	A. B.	PH. B.	B. S.	B. L.
1. Greek.....	R	.....	.....	.....
2. Latin.....	R	R	.....	.....
3. Greek and Roman History.....	R	R	.....	.....
4. French.....	.....	.....	.....	.....
5. German.....	.....	.....	.....	.....
6. Advanced Math.... { Higher Alg..	Either 4,	Either 4,	Either 4,	.....
Solid Geom...	5, or 6	5, or 6	5, or 6	.....
Trigonometry	5,	5,	5,	.....

The requirements for admission to the four courses remained relatively as above until 1896, when the course of Letters (B. L.) was discontinued. Since 1897 one degree, A. B.,

10. The distinction between the B. L. and B. S. courses as stated in the *Register* for 1885-86 was this: "Students who, after completing the first two years of the course, shall devote at least nine hours continuously during the last two years to scientific subjects, will receive the degree of Bachelor of Science, and those who shall devote at least nine hours to literary, historical, and philosophical subjects will receive the degree of Bachelor of Letters." The B. S. degree was also given for three other technical courses in agriculture, architecture and chemistry.

has been given to all the general academic courses at Cornell, and the B. S. degree has become strictly technical.

The changes which the character of the B. L. as well as the Ph. B. course has undergone at Cornell during the last thirty years are fairly typical of the uncertainty and indefiniteness which have always been attached to these "nondescript" degrees. A few leading colleges which have ceased to require Greek for admission to the classical course have discontinued these parallel courses, give but one academic degree, A. B., and offer a liberal choice in entrance terms. Leland Stanford, Jr., University has never given but one degree. Since 1890 the School of Arts at Columbia has had only the A. B. Last year Michigan abolished all academic degrees except the A. B.

The most striking thing we have noticed in this brief discussion of alternate courses is lack of definition in the courses themselves, on the one hand, and almost endless diversity in the admission requirements, on the other. The extent of this diversity, as well as the relation between the four general college courses as it stood in 1897, and as it now exists, in the main, can be readily seen in the following table. The statistics from which this table was composed were collected by the United States Bureau of Education and appear in the report of the Commission of Education, 1896-97, Vol. I. The whole number of institutions reporting was 475.

TABLE IX.

TABLE OF ADMISSION REQUIREMENTS FOR THE FOUR GENERAL COURSES.

	NUMBER OF INSTITU- TIONS	Per Cent. of Institutions requiring		
		LATIN	GREEK	A MODERN LANGUAGE
Bachelor of Arts.....	432	93%	73 $\frac{3}{8}$ %	14%
Bachelor of Philosophy....	123	81 $\frac{3}{10}$ %	5 $\frac{3}{8}$ %	41 $\frac{3}{8}$ %
Bachelor of Letters.....	98	68 $\frac{3}{10}$ %	2%	38 $\frac{7}{10}$ %
Bachelor of Science.....	318	55 $\frac{3}{10}$ %	2%	38 $\frac{3}{8}$ %

The distinction between the A. B. course and the other three is clear. From the point of view of the preparatory schools, the A. B. course is still the classical course *par excellence*. The line of demarkation among the others, however, is not so clear. The majority of colleges require some Latin for all three courses. In respect to the other languages the difference is inconsiderable. In many colleges the entrance requirements for the B. S. and B. L. courses are identical. In some institutions the B. S. degree is affixed to courses strictly technical—in agriculture, chemistry, engineering, etc. Whatever difference there is between the B. S. and B. L. courses consists in the requirements in mathematics, history and science. After examining the catalogues of twenty institutions which include both courses as general courses we have found the following facts to be true: (1) Fifteen of the twenty colleges require more science for entrance to the B. S. course; (2) seven require more mathematics; while (3) six require more history for the B. L. course. In general, then, the points of distinction between the two courses from the standpoint of the preparatory school are these: (1) The requirements for admission to the B. S. course (general) are higher in science and mathematics, and (2) the requirements for admission to the B. L. course are higher in language and history. The difference in admission terms for the Ph. B., B. L., and B. S. courses in the country at large does not warrant the needless differentiation which still exists.

There is much to be said, however, in defense of these parallel courses. They came at a time when the non-classical student had no access to college, except to certain special courses; and they have really extended the influence of the colleges by bringing the advantages of a college education within reach of thousands, particularly in small towns and rural districts.¹¹ As long as colleges still required both Latin and Greek for admission, and were not only constantly advanc-

11 (a). Of the 475 colleges that are listed in the *Report of the U. S. Commissioner of Education* for 1896-97 there are less than one hundred that do not give at least one of these degrees. Of this small minority a

ing the requisitions in these languages, but also were continually increasing the number of entrance subjects,¹² it was impossible for the smaller high schools to keep pace with the college requirements, and at the same time render to the community that service for which they had been founded. Some encouragement for such schools was necessary, and it came by the establishment of these parallel courses. Lamenting the state of things which made these concessions necessary, President Eliot says: "Is it not their plain duty (of colleges) to maintain two schedules of requirements, one for the degree of Bachelor of Arts, the other for the degree of Bachelor of Science or Philosophy, the latter demanding much less preparatory study than the former? American colleges have been severely criticised for receiving students whose preparation was confessedly inferior to that required of candidates for the degree of Bachelor of Arts; but even the oldest and strongest of them have done this, and they have done it from a genuine desire to be serviceable to as large a proportion as possible of American youth."¹³

These parallel courses, through their admission terms, have doubtless influenced preparatory schools in another way to a greater extent than has the classical course. The classical course by maintaining a high standard of requirements has been influential in holding the classics and mathematics of the preparatory school up to a certain standard, but beyond the range of those studies the influence of the classical course has not been extensive. As late as 1897 only fourteen per cent. of large number are Roman Catholic colleges, which naturally have a somewhat narrow curriculum.

(b) The following universities, Michigan, Yale, Cornell, Pennsylvania, Columbia, Princeton, Wisconsin, California, Brown and Harvard, gave, in 1884, 645 A. B. degrees, and 313 non-classical degrees; but the same ten universities in 1898 gave 1012 A. B. degrees and 1122 non-classical degrees. This tremendous development of the parallel courses measures, to some extent, the influence of these courses. These statistics are gathered in tabular form in the *Report of the President of Harvard College* for 1897-98, pages 20 and 21.

12. See Historical Discussion, p. 54.

13. *Educational Reform*, p. 200.

the colleges with an A. B. course required either French or German for admission to that course, while over forty-one per cent. required a modern language for admission to the Ph. B. course, and over thirty-eight per cent. for either the B. L. or the B. S. course.¹⁴ In a like manner the introduction of science work in the preparatory schools has received its chief encouragement from the demands of the latter courses. In 1897 less than thirty-five per cent. of the colleges in the country required science for admission to the A. B. course.¹⁵ The requirements of parallel courses have doubtless influenced the introduction of history, particularly modern, United States history, and civil government, to a greater extent than has the A. B. course. The influence of the classical course on the work of the secondary school has been intense but narrow.

There are also numerous objections to parallel courses. The most serious one is that they draw their students from courses in the preparatory schools which are manifestly weaker in the quality of the work done than the classical course has been. They are patched up courses, composed of studies lacking in continuity, and taught often by weaker and more poorly prepared teachers than have been the classics. President Eliot says in this connection: "Some universities use the four degrees called Bachelor of Arts, Bachelor of Science, Bachelor of Philosophy, and Bachelor of Letters. Many universities and colleges use two or three of these titles. In this process a grave evil has come into both schools and colleges, because the new courses in the secondary schools have generally been inferior to the old or classical course; and, moreover, the new degrees in the colleges and universities generally represent an inferior attainment on the part of the pupils, either at school or within the college or university itself, or sometimes in both places."¹⁶ The objection is not to the character of the subjects which make up these courses, but to the manner of treat-

14. Table, p. 82.

15. *Report of the United States Commissioner of Education*, 1896-97, I., 470.

16. *Educational Reform*, p. 390.

ment which they have received in many preparatory schools. This is due largely to the fact that the colleges, in order to encourage non-classical students, have accepted for admission to the semi-classical courses a lower grade of work in the various substitutes for Latin and Greek than in the classics themselves. Science is taught in many places with a most wretched laboratory equipment.¹⁷ History is frequently handled by a teacher who has never himself ventured beyond the limits of an elementary text-book. Modern languages often fall to the lot of the teacher of classics, whose linguistic training or ingenuity enables him to keep a safe distance ahead of his class. In the case of a boy who is fully prepared for admission to the classical course, however, we can be reasonably sure that he has continued the study of Latin and Greek for at least three or four years, and under a teacher who, if an A. B., has a handicap of at least a year over his brightest pupils. Colleges which maintain parallel courses frequently accept, in lieu of Greek and the full amount of Latin, several scraps of subjects,¹⁸ and thereby encourage such hasty preparation and discontinuity of effort as have been described. While parallel courses have doubtless been influential in extending the curriculum of preparatory schools, at the same time, by encouraging lower standards, they have affected seriously the quality of work done there.

These parallel courses are at the best a compromise, made necessary because the classicists have continued in the mistaken belief that the traditional A. B. belonged only to those who had well studied both Latin and Greek. The consequence of the persistence of this idea is that the admission requirements in Greek, as our historical discussion has demonstrated, have been continually advancing for two centuries. Before 1700 only a

17. "In Massachusetts, in 1897, it was reported that 66 high schools had good laboratory facilities."—Brown, E. E.; *Monograph on Secondary Education*, p. 43. That would be about twenty-seven per cent. of the high schools in Massachusetts at that time. The conditions in many so-called good fitting schools are worse still.

18. Table, p. 79; especially science requirement at Oberlin.

smattering of Greek was deemed necessary for admission to college.¹⁹ During the colonial period a knowledge of Hebrew was also regarded necessary for culture, and that language played an important part in the college curriculum.²⁰ There was then some excuse for Hebrew; it functioned to some extent in the lives of the educated, because the educated were for the most part clergymen. For the same reason Greek had a place. When the chief purpose of higher education was no longer to train ministers of the Gospel, Hebrew naturally departed. Greek, although several times vigorously assailed,²¹ has continued, at first because, before the development of scientific studies, there was little else to put into the curriculum, but since, because it has been propped up by the questionable theory of formal discipline. Many well-meaning scholars still believe sincerely that the college graduate without that mental discipline, which is said to result from the study of Greek, is less able to meet life's battle than his classic-trained classmate. This conviction persists in spite of the fact that in colleges where Greek is optional students who have studied no Greek at all rank quite as well in the more serious subjects as those who have had it. Since the year 1886-87 candidates for admission to Harvard College have been permitted to substitute certain studies for Greek. Careful records have been kept of the relative standing of graduates and undergraduates both who have and who have not had Greek. As the result President Eliot was able to state in his report for 1892, after a careful study of statistics, that "the persons who have thus far entered college without Greek are abundantly able to profit by their college life, and to win a standing which is, on the average, above that of those who entered with Greek." There are now, however, signs of weakening on every hand. We have no longer any assurance that a Bachelor of Arts knows a word of Greek; Greek is no longer required in the German gynosium;²² even Yale College has dropped Greek as a re-

19. Historical Discussions, p. 18.

20. Curriculum of Harvard College, pp. 20 and 21, *supra*.

21. Note I, p. 71.

22. *Educational Review*, January, 1902, 103.

quired study for sophomores, and Greek as an entrance requirement is already in the balance.²³ Greek will probably go the way that Hebrew has gone; that is, will become a study for the specialist. Latin, however, is receiving added attention,²⁴ and will probably remain, because it is so intimately related to our own tongue and is the root of modern European languages.

We have thus far discussed only one way by which flexibility in admission requirements has been secured. There remains another movement, still more significant, and one which bids fair to solve the problem of college admission requirements. This movement is closely related to the passing of Greek, just described, and its aim is to make admission to the A. B. course possible without Greek. The development of this phase of flexibility in admission requirements extends over the last three decades in two or three instances, but it belongs, for the most part, to the last ten years. Harvard has been the leader in this movement. At Harvard this phase of flexibility has had a very interesting development, and the Faculty have given to it a serious study for thirty years. It will be necessary to discuss this movement in considerable detail.

At Harvard University the development of flexibility in admission requirements has passed through four stages, denoted by the dates 1871, 1878, 1887, and 1898. In 1871 two sets of requirements were offered for admission to the A. B. course, called "Course I." and "Course II."²⁵ The former

23. *Yale University Catalogue*, 1901-02, 75.

24. Between 1889 and 1899 the number of students pursuing Latin in secondary schools in the United States increased 16.35 per cent. *Report of United States Commissioner of Education*, 1900, p. 2128, table.

25. COURSE I.

LATIN.

The whole of Virgil.
The whole of Cæsar.
Ten orations of Cicero.
Grammar and composition.

COURSE II.

LATIN.

Virgil, Eclogues and Æneid, 6.
Cæsar, 4.
Cicero, 6.
Grammar and prosody.

comprised the same subjects to the same extent as hitherto; the latter comprised less Latin and Greek, but advanced mathematics and elementary mechanics. In 1874 a greater variety of classical authors was included in "Course I,"²⁶ and in "Course II." the Latin requirement was reduced slightly, and analytic plane geometry was added.²⁷

The purpose of this plan of admission requirements was, as one would naturally expect, to bring the college course within reach of a class of young men whom all previous arrangements had excluded. In the Annual Report of the President of Harvard College for 1870-71 we find the following statement of the case: "In many parts of the country it is impossible for young men, however able and studious, to obtain the thoroughness of instruction in the classics which is required for a creditable admission into Harvard College. This fact, taken in connection with the recognition which the college now gives in its scheme of studies to the truly liberal character of a course of study predominately scientific, led the Faculty last year to

COURSE I (Continued.)

GREEK.

Anabasis, entire, or Goodwin and Allen's Reader.
Iliad, three books.
Grammar and composition.

MATHEMATICS.

Arithmetic, with metric system.
Algebra, through quadratics.
Plane geometry.

COURSE II (Continued.)

GREEK.

Anabasis, 4; or, Reader, III pp.
Iliad, 2.
Grammar and metres.

MATHEMATICS.

Arithmetic, with metric system.
Algebra, advanced.
Geometry, plane and solid and logarithms.
Plane trigonometry.
Elementary mechanics.

Same amount of history and geography for both courses. (See table, p. 53.)

- 26 (a). Latin: Cæsar, Cicero, Sallust, Ovid, Virgil, Latin at sight.
(b) Greek: Anabasis (4), Herodotus, 7th book.

—*Catalogue*, 1873-74.

27. Two books of Cæsar and the Eclogues of Virgil were omitted.

seek some means by which, without lowering the standard of its admission examinations, the college might be opened to young men whose superior training in mathematics compensated for their deficiencies in the classics." (p. 54.) An examination of statistics, however, will show that the resulting advantage was very slight. The new system went into effect in 1872. During the five years immediately following 1872 the number entering the freshman class indicates a total increase of thirty per cent., and an average yearly increase of thirty per cent. over the number entering during the five years immediately preceding 1872. That this increase was not due in any considerable degree to the new scheme of admission is indicated by the fact that of the candidates for admission to Harvard during the five years following the adoption of the new scheme less than five per cent. choose "Course II."²⁸ There are two explanations for this poor showing. The first is the long standing popularity of the classics, and the second is that the penalty incurred by a candidate who offered the shorter course in Greek and Latin could be met only by students of a distinctly scientific and mathematical bent of mind. The new plan, while interesting as the first attempt at flexibility, was really not a liberal one. "Course II.," which included less Latin and Greek, still called for as a preparation in those languages as did the other colleges of the time; while the only alternative for the full requisition in the classics was a very extensive knowledge of mathematics and of elementary mechanics.

In 1878 the method of admission to the A. B. course at Harvard was still further revised. In that year candidates might offer a minimum in all subjects and a maximum in two others. The minimum subjects were:

- 1, 2. Latin: (a) *Cæsar* (4), (b) *Virgil* (6, and *Eclogues*).
(c) Translation at sight of easy Latin prose.
(d) Translation into Latin of simple English passages.

28. These averages were computed from statistics contained in the Reports of the President of Harvard College.

- 3, 4. Greek: Either A. or B.
 - A. (3) Translation at sight of easy passages from Xenophon.
 - (4) Translation into Greek of simple English sentences.
 - B. (3) *Anabasis* (4), or Goodwin's Reader (III pages).
 - (4) Translation into Greek of simple sentences.
5. Ancient History and Geography (Greek and Roman).
- 6, 7, 8. Mathematics: (6) Arithmetic, (7) algebra, elementary, (8) plane geometry.
9. Physics (elementary).
10. English composition.
11. French or German (elementary).

The maximum subjects were:

I. LATIN.

- 1, 2. (1) Cicero's orations against Catiline, and Virgil's *Æneid*, V.-IX.
- (2) Translation at sight of average passages from Cicero's orations, and Latin composition.

II. GREEK.

- 1, 2. (1) Translation at sight of average passages from Herodotus (requiring more extensive reading).
- (2) Simple Greek prose composition, as either the translation at sight of average passages from the *Iliad*, or *Iliad* I., II., 1-493, and III., with questions on the passages set for translation.

III. MATHEMATICS.

- 1, 2. (1) Logarithms, and plane trigonometry.
- (2) Solid geometry.

IV. PHYSICAL AND NATURAL SCIENCE.

- 1, 2. (1) Arnott's *Physics*, to Part IV., Sec. III.
- (2) Either chemistry or botany.

To avoid waste of effort on the part of examiners and the examined, candidates were allowed to appear for examination only in those subjects in which their teachers gave them certificates of proficiency.

As it was indicated before, the admission plan of 1871 did not meet adequately the demands of the preparatory schools. There was still but slight flexibility. The Faculty deliberated

a year over the system just described. "In making this revision they were not influenced by a desire to increase the severity of the present requisites—which have probably been carried to as high a point as good judgment will allow—but by a conviction that the attainments implied in the preparatory course can be made more valuable, and that the conflicting claims of classical and scientific studies can be recognized and adjusted more satisfactorily than is done at present."²⁹ A careful study of the 1878 scheme will show that it was not much more flexible than that of 1871. The early plan offered two combinations, the revised one, six. The six possible combinations were these: All the minimum requirements with (1) advanced Greek and Latin, (2) with advanced mathematics and science, (3) with advanced Latin and mathematics, (4) with advanced Latin and science, (5) with advanced Greek and mathematics, (6) with advanced Greek and science. Using the Roman numerals applied to the advanced subjects, we may state these combinations as follows: I. and II., III. and IV., I. and III., I. and IV., II. and III., II. and IV. Besides these combinations there were options within subjects. In Greek, for instance, one had a rather liberal range of both authors and methods. In the year 1878, when the new method went into effect for the first time, forty-five per cent. of the candidates for admission chose this method; in 1879, sixty-three per cent. selected the new method, and, in 1880, eighty-five per cent.³⁰ In 1881 the old method, which had been maintained as an alternative, was discontinued. The immediate success of the new system evinces not only its superiority over the old one, but also shows how promptly the preparatory schools were able to adjust themselves to the new terms of admission. The latter is more remarkable in connection with the fact that of the students admitted to the freshman class of Harvard College between 1878 and 1881 over thirty per cent. came from public high schools.³¹

29. *Report of the President of Harvard University for the year 1876-77*, p. 58.

30. *Report of President of Harvard University for the years indicated*.

31. *Report of the President of Harvard University, 1881*.

The system of 1878 continued in use for ten years. From time to time there were slight changes, nearly all of which were in the direction of greater flexibility. In 1882 the minimum subjects were called "prescribed," and the advanced subjects "elective." These terms are self-explanatory. In the same year, as the result of a conference of certain New England colleges—to be discussed later—Harvard made a few substitutions among the Greek and Latin authors required for entrance, and extended slightly the requisitions in English.

In May, 1886, after a discussion of three years, the Harvard Faculty adopted a new system of admission requirements. The subjects were divided into two groups, called *elementary* and *advanced*. The *elementary* subjects were:

1. English, Composition and correction of specimens of bad English.
2. Greek, Translation at sight of Attic prose.
3. Latin, Translation at sight of simple prose.
4. German, Translation at sight of simple prose.
5. French, Translation at sight of ordinary prose.
6. History (including historical geography), History of Greece and Rome, or (2) History of the United States and England.
7. Mathematics, (1) Algebra, through quadratic equations; (2) Plane geometry.
8. Physical Science, (1) Astronomy and physics (text-book, Gage, or Avery), or (2) A course of experiments in physics.

The *advanced* subjects were:

1. Greek, Translation at sight of average passages from Homer, or the translation at sight of less difficult passages from both Homer and Herodotus.
2. Latin, The translation at sight of average passages from Cicero and Virgil.
3. Greek and Latin composition, translation into Greek and Latin of a passage of connected English narrative.
4. German, German classics, translation at sight of modern German prose, grammar, and composition.
5. French, same as in German.
6. Mathematics, (1) Logarithms, plane trigonometry; (2) Solid geometry, or elements of analytic geometry.

7. Mathematics, (1) Either elements of analytic geometry or solid geometry; (2) Elementary mechanics.

8. Physical science, A course of at least sixty experiments, in addition to those of elementary physics.

9. Physical science—chemistry, A course of at least sixty experiments.

The candidate might satisfy the requirements for admission by offering one of four combinations:

(a) All the elementary subjects and at least two of the advanced subjects.

(b) All the elementary subjects except either German or French, and at least three of the advanced subjects.

(c) All the elementary subjects except either Greek or Latin, and at least four advanced subjects, including 6 and one of the three numbered 7, 8, and 9.

(d) All the elementary subjects except either Greek or Latin and either French or German; and at least five advanced subjects, including 6 and one of the three numbered 7, 8, and 9.³²

Compared with the 1878 method, this system afforded considerable freedom. Under the former system at its most liberal stage a candidate had to offer at least all the prescribed subjects, while he had only four optional subjects with which to form combinations. Under the new scheme course (a) was fully as liberal as the previous system; in fact, it permitted more combinations among the advanced subjects; and courses (b), (c) and (d) extended the options still further. The especially noteworthy feature of the new system was that by offering courses (c) or (d) a candidate could gain admittance to the A. B. course in Harvard College and omit one of the classical languages. The penalty for this privilege, however, was considerable. For example, whoever desired to omit Greek was obliged to stand for course (c) or course (d). In either case he had to offer (6)—plane trigonometry and solid or analytic geometry—and either (7), (8), or (9); also two other advanced subjects. Now, with this arrangement, (6) and either (7), (8), or (9) are prescribed; and (1) and (3)—advanced

32. *Catalogue of Harvard University*, 1886-87.

Greek, and Greek and Latin advanced composition—would naturally be closed to one omitting elementary Greek. That would leave only five advanced subjects from which to choose the two additional subjects; whereas the candidates who offered both elementary Greek and Latin would have the entire list of advanced subjects from which to select the requisite two. The case of a candidate who desired to omit Latin would be the same. Those who omitted both an ancient and a modern language from the list of elementary subjects—that is, offered course (d)—were still further restricted in their choice of advanced subjects. The candidates offering course (a) or course (b) had a decided advantage so far as freedom of choice was concerned; in other words, the new scheme still favored preparation in the classics. The following table shows the relative popularity of the four courses during ten consecutive years. In this case the popularity of each method would indicate the ability of secondary schools to meet the requirements of that method, and measures, therefore, the relative advantage to preparatory schools of each course of entrance requirements.

TABLE X*

TABLE SHOWING RELATIVE ADVANTAGE OF THE FOUR METHODS OF ADMISSION TO HARVARD FROM 1888 TO 1898

	PERCENTAGE OF CANDIDATES OFFERING IN YEAR										
	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
Course (a)...	31.43	37.31	36.63	39.96	43.36	41.98	38.03	40.96	41.28	35.81	38.89
Course (b)...	64.44	55.35	55.08	52.36	50.66	50.73	54.45	52.17	50.66	53.47	49.39
Course (c)...	3.50	6.42	7.49	6.69	5.54	7.09	6.73	6.69	6.94	8.95	11.37
Course (d)...	0.63	0.92	0.80	0.99	0.44	0.20	0.79	0.18	1.12	1.77	0.35
	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

* The percentages were computed from statistics in the *Report of the President of Harvard University* for the years indicated.

Course (d) was evidently never very popular; the range of option, as we have shown, was altogether too small. Again

it required considerable advanced mathematics, and relatively few boys have a taste for that subject; moreover, the time required to master the substitutes for Greek was considerably more than that for Greek. In 1898 only three-tenths of all the candidates for admission staked their chances on this course. Course (c), on the other hand, which also omitted an ancient language, but included both French and German, had a gradual increase until 1898. This indicates to a certain extent a tendency in the preparatory schools away from the classics, especially Greek, and towards the modern languages. The ratio between course (a) and course (b) remained fairly constant, with a slight increase in favor of course (a), which increase was probably due to some extent to an increased attention to German in the secondary schools. Course (b) throughout the decade remained the most attractive to the secondary schools, because, perhaps, it corresponded most nearly to the plan previous to 1887, and was more like the requirements for admission to other colleges.

In 1898, after a deliberation of three years, the Faculty of Harvard University adopted an entirely new system of admission requirements, which is, in substance, the one now in use. In a preliminary scheme algebra and history had been made elective; but these had to be restored to the list of required studies before the Corporation and Board of Overseers would accept the new system of entrance requirements. This little episode in the deliberations over the new requisitions is interesting, because it shows how strongly the tendency toward flexibility had set in. Under the new system examinations are held in the following subjects:

ELEMENTARY.

English (4).
Greek (4).
Latin (4).
German (2).
French (2).

ADVANCED.

Greek (2).
Latin (2).
German (2).
French (2).

Ancient History (2), or English and American History (2).	One of the following four: Ancient History (2). English and American History (2). History of Europe (2). History of a period (2).
Algebra (2).	
Geometry (3), or Plane Geometry (2).	Algebra (1). Logarithms and Trigonometry (1). Astronomy (1)
Physics (2).	
Chemistry (2).	Physics (2).
Physiography (1).	Meteorology (1).
Anatomy, etc. (1).	

The figures after each subject indicate the relative weight, "points," of that study in determining the candidate's fitness for admission. "A 'point' is estimated to represent approximately a half-year's work in one study, of four or five lessons a week, in school, or a 'half-course' in college."³³

For admission a candidate must offer twenty-six points, of which at least four must be in advanced studies. The studies offered must include:

English.....	4
One ancient language (Elem. Latin or Elem. Greek).....	4
One modern foreign language (Elem. German or Elem. French)	2
Elementary History.....	2
Algebra.....	2
Geometry, or Plane Geometry.....	3 or 2
Studies amounting to two points from the following sciences:	
Elementary Physics, Chemistry, Physiography, Anatomy, etc.	
Astronomy	2

19 or 18

The only restriction in the choice of advanced subjects is, that "no candidate may offer an advanced study who does not at the same time or earlier offer the corresponding elementary study; but physics is considered elementary with respect to

33. *Report of President of Harvard University, 1897-98, p. 101.*

meteorology, and geometry or plane geometry with respect to astronomy."³⁴

Compared with the old method the new method involves the following changes:

(1) It includes several new subjects; physiography, anatomy (with physiology and hygiene), European history, and history of a period, advanced Greek and Roman history, and meteorology.

(2) Several of the old subjects have received new definitions—elementary geometry means both plane and solid geometry; elementary Latin comprises both prose and poetry; for both elementary Latin and Greek two courses are offered; (a) sight translation, and (b) a thorough examination on a prescribed portion of some classical author; elementary French and German comprise composition as well as translation. All the sciences now prescribe laboratory and observational study in addition to, or in place of, text-book knowledge; in elementary physical science the alternative of an examination on a text-book is discontinued. The new definitions in general are calculated to encourage the development of power in originality and in constructive ability.

(3) The new system affords a much more liberal option in the admission subjects. Under the old system, as we have seen, there were only four combinations, besides certain options within subjects—for instance, physical science and history—while under the new system English and mathematics are the only subjects among the elementary studies absolutely required of all candidates, and the remaining elementary subjects admit of a large number of slightly different combinations (over thirty), and those combinations enter into many new ones with the advanced subjects, making a very wide range of option possible. The freedom for the individual candidate under the new scheme is described by President Eliot as follows: "Nearly three-quarters of his preparation may be just as it was one hundred years ago, or fifty years ago—namely, in

Latin, Greek, elementary mathematics, and ancient history; or, on the other hand, these traditional subjects may be represented by less than one-third of his secondary school studies—namely, by Latin, algebra, and geometry. Again, nearly half of his preparatory studies may be English and the modern languages; or the natural sciences, which thirty years ago were not accepted at all for admission to college, may constitute a little more than one-third of his preparatory studies. Further, at a small additional cost of offering three advanced subjects instead of two, the candidate may present himself in modern languages and history for sixteen out of twenty-six points required; whereas thirty years ago the modern languages were not accepted at all, and history was represented only by a fragmentary and fleeting acquaintance with Greek and Roman history, such as a boy might easily acquire in a day or two from a small primer of ancient history.”³⁵ If the original plan of the Faculty making elementary algebra and elementary history elective had been accepted by the Board of Overseers, election in the requirements for admission to Harvard College would have been almost entirely free, and none of the traditional preparatory studies would have been bolstered up any longer by arbitrary requisition. The system of admission just described is the one now in use at Harvard, and the last issued catalogue indicates no significant changes in details.

Many of the leading colleges in the country that have made any attempt to break with the old system of absolute prescription of admission terms, or to make any concessions to the social demands of the age as they find expression in the curricula of the public high schools, have had an experience similar to that of Harvard University. It has been possible, however, for newer institutions, being unhampered by tradition—Leland Stanford, Jr., University, for instance—to adopt promptly a system which in older colleges is the result of an up-hill struggle of a progressive minority against the doubt and prejudice of the stubborn majority.

The development of flexibility in admission requirements

35. *Report of the President of Harvard University*, 1898-99, pp. 7, 8.

has passed through three distinct stages, represented by three systems of admission. These we may call the systems of absolute prescription, the group system, and the system of free election. All the colleges of the first class have passed out of the first stage, with the singular exceptions of Yale and Princeton. Every candidate for admission to the A. B. course in these colleges must still pass an examination in Greek, Latin, mathematics, modern languages, history, and English. Of course the candidate has some option among classical authors, and can choose between French and German. This is really not liberty. While both universities have maintained a scientific school for many years, both have always forced the candidates for the A. B. course through the same narrow door.

The group system has taken two forms. The earliest, of course, arose with the semi-classical degrees, Ph. B., B. L., B. S., etc., each course having its particular group of admission subjects. This phase of flexibility has been discussed above. It is still used in colleges that maintain distinct semi-classical courses; but in recent years these groups have been further subdivided, so that there is considerable elasticity within the various groups. The common substitutes for Greek are advanced French and German, advanced physical science, and advanced mathematics. Many leading colleges, among them Harvard, Columbia, Cornell, Michigan, and Leland Stanford, by allowing suitable substitutes for Greek, have been able to avoid unnecessary distinctions in degrees and courses, and now grant only the A. B. for a general academic course.

The second form of the group system is represented by the system which existed at Harvard from 1871 until the present method was adopted in 1898. This form offers two or more groups of subjects, any one of which admits a candidate to the A. B. course, and the significant feature is that one or more of the groups provide some substitute for Greek. For instance, at Harvard in 1898 there were two groups which omitted Greek or Latin; at Columbia in 1898 there were three groups, one omitting Greek; at Cornell in 1898 there were three groups, two of which included no Greek.

The third type of flexibility in admission requirements, the system of free election, was first established among the larger colleges at Leland Stanford, Jr., University at the opening of that institution in 1891; and no other method of admission has since been employed by that university. Choice of entrance subjects has also been almost absolutely free there. English is now the only prescribed subject. In 1891 a candidate for admission had simply to offer English and any ten of a list of twenty-five other studies.³⁶ The subjects, however, were evidently considered of equal weight and were given no rating, or relative valuation, until 1894. In that year the candidate was allowed a choice of twenty-two subjects from which he had to select studies, amounting to *twelve* "credits" (including English, two credits).³⁷ The unit on which the credit was based was a year's work in high school. All subjects were placed upon an exact equality. In 1900 thirteen credits were required for admission. Since 1901 fifteen credits have been required, but the total number of credits from which to select was increased to thirty-two by the addition of advanced courses in English literature and in all the languages, except Spanish, and by the addition of entirely new subjects—physiography (1), mechanical drawing ($\frac{1}{2}$), wood-working ($\frac{1}{2}$), forge work ($\frac{1}{2}$), foundry work ($\frac{1}{2}$), machine shop work (1); the total number is now about thirty-eight.

36. The subjects were:

- | | |
|-------------------------------------|--------------------------------|
| 1. English. | 12. Freehand drawing. |
| 2, 3. Elementary algebra. | 13. American history. |
| 4. Plane geometry. | 14. English history. |
| 5. Solid geometry and trigonometry. | 15. Grecian and Roman history. |
| 6. Advanced algebra. | 16. English literature. |
| 7. Physics. | 17. Spanish. |
| 8. Chemistry. | 18-19. French. |
| 9. Physiology. | 20-21. German. |
| 10. Botany. | 22-23. Latin. |
| 11. Zoology. | 24. Latin. |
| | 25-26. Greek. |

37. Solid geometry and trigonometry together counted one credit; English, elementary algebra, French, German, elementary Latin, advanced Latin and Greek, each two credits; all others, each one credit.

The system of free election, or the point system of admission, has developed almost entirely within the last five years; already, however, many of the leading colleges in the United States have adopted the system;³⁸ and, while all agree in the principle, there is wide difference in the application. The system in general is this: A list of from twenty to thirty subjects is published, to each subject a value (point) is attached, and candidates for admission must secure a certain number of points. So far all the colleges with this system agree; further they do not. Colleges differ as to the number of subjects offered, and, consequently, there is a difference in the amount of option afforded.³⁹ Colleges differ in the definition of the same subject. There is a difference in the method of rating subjects. Columbia and Harvard make a distinction between elementary and advanced subjects. There is no substantial agreement as to the meaning of the term "point"; at Harvard it means a subject pursued *half* a school year for *five* periods a week, while at Michigan it means a subject pursued during a *full* school year for *four* periods a week, and at Leland Stanford it means a study pursued a *full* year for *five* periods a week.⁴⁰ Among colleges that make a point represent a year's study, however, there is substantial agreement as to the number of points required. The usual number is fifteen. In no college, however, is election absolutely free. All colleges require English, the number of points differing according to the rating of the subject; elementary mathematics is commonly prescribed; and Harvard requires of all an ancient language

38. Harvard, Columbia, Michigan, Chicago, California, and Leland Stanford universities, and several others, chiefly state universities, have adopted the point system. The "point," of course, is simply a convenient means of stating a quantitative requirement.

39. The University of Michigan offers 15 subjects, Leland Stanford 29.

40. The rating of the University of Iowa is unique. A "credit" is "regarded as the equivalent of one study daily for a term of twelve weeks on a basis of three studies a day. Therefore, nine credits stand for a normal year's work." Thirty-six credits are required.—*Catalogue for 1900-1901*.

TABLE XI

LIST AND RATING OF SUBJECTS FOR ADMISSION TO FOUR COLLEGES

HARVARD	COLUMBIA	MICHIGAN	LELAND STANFORD
26 points; 4 in adv. studies	15 points	15 points	15 points
English (4) R Algebra (2) R Geometry (2) or (3) R German (2) } one French (2) } R Greek (4) } one Latin (4) } R Anc. Hist. (2) } Eng. & Am. History (2) } one Physics (2) } Chem. (2) } Physiography (1) } 2 pts. Anat. (1) } R	English (3) R Algebra } Geometry } (3) R German (2) } French (2) } A Spanish (2) } Greek (3) Latin (4) Ancient Hist. (1) or Eng. and Am. History (1) Physics (1) Chemistry (1) Botany (1) Botany (1) Physiog. (1) Zoology (1) } B	English (3) R Algebra } Geometry } (3) R German (2) or (4) French (2) or (4) Greek (2) Latin (2) or (4) History (1), (2) or (3) Physics (1) R Chemistry (1) Botany (1) Zoology (1) English Literature (1)	Eng. Comp. (2) R Algebra (1½) Geometry (1) German (2, 3, 4) French (2, 3) Spanish (1) Greek (2, 3) Latin (2, 3, 4) Anc. History (1) Med. and Mod. History (1) Eng. Hist. (1) Am. Hist. (1) Physics (1) Chemistry (1) Botany (1) Zoology (1) Physiography (1) Physiology (1) Biology (1) Eng. Lit. (1, 2) Solid Geom. (½) Trigonometry (½) Adv. Algebra (½, 1, 1½) Freehand Drawing (1) Mechanical Drawing (½) Forge Work (½) Foundry Work (½) Machine Shop Work (½)
ADVANCED	ADVANCED		
Algebra (1) Logarithms and Trigonometry (1) German (2) French (2) Greek (2) Latin (2) One of following: Ancient History (2) Eng. and Am. History (2) History of Europe (2) History of a Period (2) Astronomy (1) Physics (2) Meteorology (1)	Mathematics (1) German (1) French (1) Greek (1) Latin (1) History (1) Physics (1)		

R means required of all candidates for admission.

A—Candidate may offer not more than 4 points of these subjects.

B—Not more than 2 points may be offered.

C—The additional 2 points in German, French, and Latin are in advanced study. Two points are required of every candidate in one of these languages.

(4), a modern language (2), history (2), science (2), besides English (4), and elementary mathematics (5). At Harvard there are only seven points in which there is absolutely free choice.

The preceding table includes the lists of subjects offered by Harvard, Columbia, Michigan, and Leland Stanford, and the rating of each subject.

From the table above it will be seen that all four colleges prescribe English; Columbia, Harvard, and Michigan prescribe elementary mathematics as well; and Michigan requires physics and one language of all; while at Harvard all candidates must offer, besides English and elementary mathematics, a modern language, an ancient language, some branch of history, and a branch of science.

The following table will show the extent of flexibility afforded by the point system in six of the largest universities. In this table a point is intended to mean approximately a year of daily recitations in a subject, and, in the case of Harvard and Nebraska, where a point means a half-year study, the numbers have been divided by two.

TABLE XII.

TABLE SHOWING THE RELATIVE DEGREES OF FLEXIBILITY IN SIX LEADING UNIVERSITIES.

	R*	O†
Harvard University.....	9	4
Columbia University.....	6	9
University of Michigan ⁴¹	9	6
University of Chicago.....	10½	4½
University of Nebraska.....	8½	5½
Leland Stanford Junior University.....	2	13

* R means number of prescribed points for all candidates.

† O means number of points candidates may choose without restriction.

Among these six universities the average number of prescribed points in which the candidate has free choice is seven. It is evident that the highest degree of freedom is at Leland

41. In the case of Michigan only seven points are really prescribed, as the other two points may be selected from four different languages.

Stanford, and the lowest at Chicago. Moreover, at Chicago the ten and one-half points are positively prescribed for all candidates for the course in arts; otherwise the student must enter another course; and there is no option between Latin and Greek, or between modern and ancient history, as at Harvard University.

During less than thirty years, as we have seen, the tendency in college admission requirements has shifted from a system of almost absolute prescription to one of considerable freedom. How far the tendency towards electives in admission requirements should go is for both the college and the preparatory school more than a question of convenience. For the college it means a change in the character of the A. B. course, and in the traditional conception of that degree; and the aim and function of the secondary school is also involved. The general adoption of a scheme of free election in admission requirements can follow only after the traditional significance of the A. B. degree has been completely revised—only after that degree no longer means that all who receive it must pass through the same courses of studies for three-quarters of their academic career, but when simply, as President Eliot says, “all Bachelors of Arts have spent from seven to ten years, somewhere between the ages of twelve and twenty-three, in liberal studies.”⁴² For the secondary school free election in admission requirements means that that important part of our educational system need no longer be hampered by the divided aim of preparing for college and preparing for life.

This leads us to a fundamental thesis, which as a principle seems axiomatic, but in practice is frequently ignored. Each stage of a system of public education should have a distinct aim and function, and should not be merely a stepping stone to something higher. Manifestly, this principle applied to the field of secondary education would mean that the aim of the secondary school is not to prepare for college. Particularly is this so in the case of the public high school. In 1900 from all the public high schools in the United States 61,737 students

42. *Report of President of Harvard University, 1884-85*, p. 49.

graduated. Of these only 30.28 per cent. were prepared for college.⁴³ The per cent. that finally entered college was certainly much lower. In other words, over seventy per cent. of high-school graduates, for physiological, economic or other reasons, never get to any sort of a college. Moreover, of the 519,251 students enrolled in public high schools during 1899-1900 nearly ninety per cent. were not preparing for either classical or scientific college. Upon the needs of these should the aim and curriculum of the high school be constructed. These should be given the best preparation possible for complete living in the community. The public high school that fails to perform such a function adequately does not deserve the right to exist. According to President Eliot, the "great sin of our public high schools is that they give an inferior course of instruction to those children whose education is to be the shortest."⁴⁴ In other words, we take pains with those who are going to college, with the hope, perhaps, that they may reflect credit on their teachers; and we give an inferior course of training to those who are to enter the ranks of wage-earners at once, and whose education will end with the high-school course. It is because colleges refuse to admit that the same training which society has decided prepares for useful citizenship does not prepare equally well for college, that these conditions prevail. It may be, however, that the demands of the public, as represented by the aim of the high school, and the demands of the college coincide; if so, well and good; if not, the trouble is with the requisitions of the college; and thence must come the concession. And it is interesting to note that the history of college admission requirements for a quarter of a century has been a series of concessions to the high schools.

We do not maintain here that entrance conditions should be so lax as to become a mere *pons asinorum* for the indolent and hopelessly dull pupils, or that the character of college entrance requirements should be determined by what the weakest high

43. *Report of Commissioner of Education*, 1900, pp. 2130 and 2137.

44. *Educational Review*, XIII., 467.

schools can do; nor have we much cause for apprehension on this score. Our historical study has emphasized the fact that the very cause of the breach between the high school and the college was the narrow range of entrance subjects and the increasing demands within that range. Dr. Harris expressed some of the truth when he said: "Had the Latin and Greek requirements remained the same the new standard of admission would have fitted the course of study of the public high school, and the problem would have been solved."⁴⁵ Many colleges have greatly strengthened the high schools by keeping a high standard of admission; but they have hampered them more by maintaining a narrow means of ingress. The ideal in admission requirements is a wide range of flexibility, together with a reasonably high standard in each subject. In short, the scope of subjects should be comprehensive but equally strong at all points. This ideal the system of free election is well calculated to attain.

The system has now been in use long enough in any considerable number of colleges to have proved its efficiency. The general principle is sound. There are several details in the application, however, which call for some discussion. The first concerns the unit of valuation, or "point." By this system admission subjects are rated on the basis of time spent in secondary schools on the various studies. Of course this is only a rough valuation, and does not express all the truth. There is often little correlation between the time spent and the quality of work done. Moreover, to determine the relative weight of subjects for admission to college on the basis of the relative worth of studies would result only in an endless squabble. For, to determine the intrinsic value of a subject necessitates getting outside the subject, approaching it from the point of view of society, and applying the measure of social worth, which measure is naturally an uncertain and fluctuating one. The relative value of studies is now based on opinion, simply. And, for want of a more reliable standard of measure, we leave this matter out of consideration. The Committee on College En-

45. *Report of the Commissioner of Education*, 1892-93, 1466.

trance Requirements of the National Educational Association suggests that the unit of measure should be based on "both the quantity and quality of work done."⁴⁶ Doubtless it should; but with no national system of secondary education, and in view of the uncertain quality which exists in secondary instruction, we shall be fortunate, as the Committee further suggests, if we can attain to a general agreement on a time unit. The suggestion of the committee that a unit should mean four periods a week running through a school year is a good one. The element of quality will be tested by the entrance examination.

The tendency towards unlimited flexibility is another question to be considered in connection with the system of free election. How far should election be permitted? Again we must take the position of the secondary school. The function of secondary education is evidently the determining factor. The period of secondary education cannot be determined by confining it between two artificial limits—the elementary school, on the one hand, and the college, on the other. As Dr. Butler says: "The definition-makers gravely walk about in a circle when they define secondary as that which succeeds elementary and precedes higher education, and elementary education as that which precedes it."⁴⁷ The period of secondary education is determined by another consideration—the nature of the child. "The secondary-school period, then, is essentially the period of adolescence."⁴⁸ This factor determines the character of secondary studies. During adolescence the youth begins to reflect; he becomes seriously concerned about himself and his future; his relation to society occurs to him; he acquires new and divers interests, some one of which will determine his life work; in short, during the period of adolescence he finds himself. The school should assist this process, therefore, by supplying a wide variety of intellectual activities, so that, when the youth is ready to pass on to his trade or to the study of a

46. *Proceedings National Educational Association*, 1899, 672.

47. *Educational Review*, XVI., 16.

48. *Ibid*, p. 17.

profession, there shall be no mistake as to wherein lie his special powers. The secondary school fulfills its purpose, then, only when it affords the youth "an introduction to many lines of knowledge from which ultimately may emerge the chosen profession and genuine culture."⁴⁹ Foreign languages, which lead to an acquaintance with the thought of other nations; higher mathematics, which unlock the science of inorganic things; history, which vitalizes the past and furnishes standards for a better understanding and judgment of present social problems; literature and natural science—each of these five branches of knowledge should to some extent share in the intellectual equipment of the graduate of a secondary school. As Dr. Harris says: "The ideal course of study demands that five windows of the soul be kept open."⁵⁰ We conceive the function of secondary education, then, to be this: to furnish the youth primarily with general culture as a basis for future specialization. Differentiation, then, rather than specialization, should characterize the work of the secondary school. General culture need not be construed to imply a knowledge of certain specific studies, like Latin, Greek, and mathematics, as the term connoted a century ago; but it means a fair acquaintance with five great fields of human knowledge—the vernacular and its literature, foreign languages, and their literature, mathematics, history, and natural science. Be it understood that this scheme of analysis does not intend to exclude studies for expression, like music, art, drawing, and manual training, so far as they are not technical in character; but just as an elementary education is incomplete which does not afford a working knowledge of reading, writing, and arithmetic, so a secondary education is defective which does not embrace to some extent each of the five great divisions of intellectual activity.

The period of secondary education is not necessarily confined to the four years of school life which happen to fall between the elementary school and the college, and which generally com-

49. Abercrombie, D. W., *School Review*, 1899, 420.

50. *Report of the Commissioner of Education*, 1892-93, 1462.

prise the period of the public high school. There are numerous overlappings. The first two years in most of our colleges belong to the period of secondary education; also certain studies, distinctly secondary in character, have filtered down into the upper grade of the elementary school. In other words, the joints in our educational system, because of the unique position of the college and the public high school, have become dove-tailed. Secondary education, *per se*, however, stops the moment specialization begins; and that time may be, as it usually is, about the middle of the college course; or it may be, as it really should, at the close of the high school course. Dr. Russell, speaking of the upper limit of the secondary period, says: "It lasts until such time as the individual is able to take up independent work, whether it be in domestic life, in the trades, in business, or in the university."⁵¹ The confused state of secondary education in this country is due to the fact that the scope of neither the college nor the high school is well defined. Our colleges, for the most part, are a combination between a gymnasium and a university; and our high schools do only a part of the work which belongs to their field, because of the fact that our elementary schools require about two years more than necessary to accomplish the work which belongs to them.

Having stated what we conceive to be the function of the secondary school, let us return to our question: How far should election in college admission requirements be permitted? It is necessary at this point to introduce another fundamental thesis: College entrance requirements should be administered not so much to eliminate undesirable students from college as to vitalize and stimulate the work of the secondary school. The influence of admission requirements should be positive rather than negative, and every change in entrance requirements should be regarded in the light of its possible effect on the secondary school. Let us consider, now, what may be the probable influence of unlimited election in college admission requirements. Unrestricted choice from a miscellaneous list

51. Russell, James E., *School Review*, IV., 530.

of subjects may encourage in secondary schools one of two tendencies, either of which is unhealthy. Students, particularly those who are going on to college, may be encouraged, on the one hand, to immature specialization, or, on the other, to a profitless scattering of energies. In either case the true purpose of secondary education is to some extent defeated. At Leland Stanford, Jr., University election in admission requirements is almost entirely free. English is the only required subject. There are twenty-eight additional subjects, from which the candidate must offer thirteen units, with absolutely no restriction, except that biology may not be offered if botany or zoology have already been credited. Every subject, except English, is on the *free list*. It is possible, therefore, for a student to enter the university with no knowledge of mathematics and science, or of language and history, or of mathematics, history and science. In other words, such unrestricted election encourages a student to enter the university without having touched one, two, or even three of the five great fields of knowledge; or, as Dr. Harris would say, the student might enter the university with three "windows of the soul" closed. In other words, unrestricted election in college admission requirements makes specialization possible without general culture. To employ a figure, the intellectual state of the student on entering college may be likened to a needle rather than a pyramid. It will be readily seen, also, that miscellaneous election from a miscellaneous mass of subjects can effect a scattering of energies on the part of the student, and a lack of thoroughness at any point.

The present Harvard plan of admission avoids the disadvantages just mentioned.⁵² It not only affords a sufficient range of flexibility, but also imposes on the candidate such an organic unity of choice as demands a good degree of general culture. Scattering and superficiality are also prevented by the provision that every candidate must present at least four credits in advanced studies. In short, general culture is encouraged, on the one hand, and some degree of specialization,

52. See pages 96 and 97.

on the other. We make bold at this point to suggest a scheme of admission requirements which coincides with our conception of the aim and function of the secondary school.

TABLE XIII.

SUGGESTED PLAN OF ADMISSION REQUIREMENTS.

Sixteen points to be offered in all. A "point" represents a study pursued for one year, five periods a week.

ELEMENTARY STUDIES.

Studies must be selected as follows: 5 points in languages, 2 in mathematics, 2 in science, and 2 in history.

ADVANCED STUDIES.

Three points to be selected, two only from any group.

I	POINTS.
English	2*

II.	
Latin	3
Greek	2
French	2
German	2
Spanish	1

III.	
Algebra	1
Geometry	1

IV.	
Physics	1
Chemistry	1
Biology, or botany and zoology	1
Geology	1
Physiography	1
Astronomy and meteorology..	1
Anatomy, physiology, etc.....	1

V.	
Ancient history.....	1
American history, and civics...	1
English and modern European history	1
Mediaeval history	1

* English required of all.

I	POINTS.
Latin	1
Greek	1
French	1
German	1
Anglo-Saxon	1

II.	
Algebra (advanced).....	1
Solid geometry and trigonometry	1

III.	
Physics	1
Chemistry	1
Geology	1

IV.	
Greek and Roman history.....	1
American and English history.	1
Modern European history.....	1
History of a period.....	1
Political economy	1

Of course this plan is simply suggestive, and does not claim to give the right valuation to each subject. The advantages which this scheme does claim are these: (1) It compels a student to try himself in all the five great fields of knowledge, in order to determine his tastes. (2) It insures a minimum, at least, of general culture. (3) It provides for some degree of specialization, at least within certain fields, and thereby forestalls a scattering of energies by compelling the student to pursue certain subjects beyond the elements. (4) On the other hand, the plan prevents extreme specialization. (5) A sufficient degree of flexibility is provided, and, at the same time, organic unity of selection is assured. We believe that such an arrangement will provide a suitable preparation for the student who is going either to college or to scientific school. The boy whose schooling is to stop at graduation from the high school can substitute for advanced studies such subjects as bookkeeping, stenography, commercial law, or such forms of manual and industrial work as look to his future business or trade. Moreover, the important issue of deciding upon a college career can be postponed until the last year of the high-school course.

Anglo-Saxon is an innovation advisedly introduced. In the first place, if there is anything in linguistic training, Anglo-Saxon is equal to Latin and Greek in that respect. Secondly, students who ever intend to pursue the study of the English language beyond its elements, or to do anything in philology, will find a knowledge of Anglo-Saxon indispensable; and it is much easier to grasp the elements of that language in youth than after the mind has become set and refuses to bend readily to the acquisition of a new language. Thirdly, Anglo-Saxon, so far as vocabulary, grammar, and syntax are concerned, is more closely related to our modern English than either Latin or Greek. And, fourthly, the Anglo-Saxon language comprises a somewhat crude but a naïve and rather extensive literature.⁵³

53. *Latin Versus the Vernacular in Modern Education*, by Professor G. R. Carpenter, is an excellent article on this subject. *Columbia University Quarterly*, June, 1901.

It may be said of the scheme proposed that it endorses both the principle of formal training and of premature specialization. Be it so, then we are open to the charge of inconsistency; because both of these principles have been opposed in this dissertation. Does not the plan for a fivefold division really assume, after all, that what is wanted of a candidate for college is such general intellectual power as would come from the study of English language, mathematics, science, and history? That we do not deny. But is that formal discipline in the extreme form which was opposed above? The theory of formal discipline, as it has been employed as a weapon in defense of the classics, is that the study of Greek trains, as nothing else can, the memory, the judgment, power of discrimination, and a dozen other faculties, which training has efficiency in other entirely unrelated fields of intellectual activity. We simply take exceptions to the claim that any one subject, in itself, can afford any such general efficiency. We are inclined to accept the conclusions of later psychological research, which points clearly to the fact that mental powers are rather highly specialized, and that no one subject can afford all-round intellectual gymnastics. Our conviction is, however, that the thorough study of several branches does train and strengthen a number of specific memories, judgments, discriminations, if the plural can be so used, the aggregate of which is general mental power. And the stronger this intellectual efficiency is the better prepared is its possessor to succeed in lines of activity which are similar to those in which his training operated. Such a training we believe to be a function of the secondary school. Our fivefold division, however, has another more important purpose, and that is to afford the student an ample scope for the discovery of his peculiar tastes. It also is intended to provide for such general culture as comes from the acquisition of the valuable information contained in the five large divisions of knowledge.

The only suggestion in our scheme of premature specialization is in the arrangement of advanced subjects. The suggestion therein made, however, is simply an enunciation of a

principle already successfully applied at Harvard, Columbia, and several other universities in the vanguard of educational progress; moreover, it is in line with the recommendations of the Committee on College Entrance Requirements of the National Educational Association. Our scheme especially precludes narrow specialization by permitting only two points to be selected from any group. In view of the fact, also, that the advanced studies would necessarily presuppose corresponding elementary studies, specialization, if it could be called such, could not very well commence before the last year of the secondary course. The plan also looks to future rather than to present educational conditions. It recognizes three conditions, or, rather, inevitable tendencies, in the development of higher and secondary education: First, a general improvement in secondary schools in the United States, together with a general lengthening of the secondary period; second, a tendency of the larger colleges to become universities and to permit some specialization from the start; and, third, the present advanced age of students on entrance into college. In fact, graduates of good high schools to-day are nearly as old as were college sophomores half a century ago, and they are quite as old as many German and French students at the beginning of their university career, which career means specialization at once. Now, any one of these conditions, and certainly all three of them, not only makes it possible for the college to require that students on entering shall have pursued some subjects beyond the elements, but also makes it desirable for a student of eighteen or over to have discovered his particular bent, and to have subjected himself to a thorough trial in a subject or two which correspond to his special tastes. And that is all that is intended by the scheme of advanced studies. We believe, therefore, that the scheme of admission requirements proposed will insure on the part of the candidate for college a fair degree of general culture, and also special efficiency in one or two lines, which are an index of his special bent, which indicate, to some extent, his future career, and which afford him a safe core around which to shape his university course.

CHAPTER IV

THE "ACCREDITING SYSTEM"

A SECOND means of securing closer articulation between the colleges and the secondary schools, particularly the public high schools, has been the so-called "accrediting system" of admission. Prior to 1870 the only gate to the college was some form of examination. In the Calendar of the University of Michigan for 1870-71 the following notice was issued to the preparatory schools of the State of Michigan: "Whenever the Faculty shall be satisfied that the preparatory course in any school is conducted by a sufficient number of competent instructors, and has been brought up fully to the foregoing requirements, the diploma of such school, certifying that the holder has completed the preparatory course and sustained the examination in the same, shall entitle the candidate to be admitted to the university without further examination."¹ The Calendar for the succeeding year announced that a "committee of the Faculty will visit, once every year, any public high school, on request of its School Board, and report its condition to the Faculty."² On the basis of this report the accrediting of the school depended. The establishment of such a *nexus* was to some extent a realization of an ambition which had been uppermost in the minds of the founders of the university, and that was to create a state system of education similar to that of Prussia—an educational unity from the primary school through the university. True to German ideals, therefore, the *abiturienten-examen* of the high school, as it were, was accepted as a passport to the University of Michigan. At this point, however, the resemblance to the Prussian system ceased. The diploma system of admission to the University of

1. Page 49.

2. Calendar, 1871-72, p. 27.

Michigan has remained in substance what it was in 1872. The system, however, has had a marvelous growth and a very extensive influence. In 1876 there were only nine affiliated high schools, all in Michigan. In 1885 the privilege of certification was extended to schools beyond the limits of the State, and the term of certification was lengthened to three years.³ By the year 1899 the number of secondary schools privileged to send students to the University of Michigan on diplomas was 187, distributed among fifteen different States.

A system of admission without examination patterned after that of Michigan, but modified to meet varying conditions, was promptly adopted by other colleges. Since 1874 students have been admitted to Indiana University on the certificate of certain high schools. In Indiana schools thus privileged were "designated and commissioned" by the State Board of Education. In 1879 the University of Wisconsin extended to high schools in the State the privilege of sending students to the university without examination. The accrediting of the schools was determined in the following way: "On ——— application the university will send a professor to examine the courses and methods of instruction in the school, and on his favorable report will enter it on the accredited high school list of the university."⁴ Previous to this time (in 1872) a State law was passed which provided for the admission to the sub-freshman class of such students as could pass an examination given by the principals of graded schools.⁵ The accrediting system was introduced at the University of California in 1884 by the following resolution of the Board of Regents: "Upon the request of the principal of any public school in California whose course of study embraces, in kind and extent, the subjects required for admission to any college of the university, a committee of the Faculty will visit such schools, and report upon the quality of the instruction there given."⁶ Schools

3. *Calendar*, 1884-85, p. 38.

4. *Catalogue of the University of Wisconsin*, 1878-79, 46.

5. *Catalogue*, 1872-73, 65.

6. *Register of University of California*, 1883-84, 27.

reported favorably were allowed to send students to the university upon the personal or written recommendation of the principal. The "accrediting system" of admission is now the prevailing one in the West, especially among State colleges. Various modifications of this system have been adopted in all parts of the country by all sorts of institutions. By 1897 there were 42 State colleges and about 150 other institutions in which some form of a certificating system of admission was in use.

The method of admission just described is more accurately termed the "diploma system," and it deserves to be distinguished sharply from the so-called "certificate system," which, as it is often employed in Eastern colleges, is no system at all. The difference between the diploma and the certificate system lies in the organic connection between the college and the preparatory school. The diploma system at its best involves (1) a careful examination of the petitioning school by university officials or members of the State board before the school is "accredited;" (2) subsequent inspection at regular intervals; (3) enjoyment of the privilege for a limited period; (4) the frequent submission to the university of an accurate, complete, and faithful report of the work of the high school; (5) the possible revocation of the privilege of certification if the school fails to meet the stipulated regulations or lowers its standards. What is herein termed the certificate system does not possess the safeguards of inspection and periodic visitation. A certain preparatory school on its reputation for being a "good school," or because its principal was graduated from the college in question, is granted, often for an unlimited period, the privilege of sending its graduates to the college on the certificate of the principal. The determining factors are the generosity of the college and the good faith of the school principal. Like the English common law, the precedent once established, the thing becomes fixed and then grows. The certificate system without a thorough and frequent inspection of the preparatory schools, with no safeguard except the biased judgment and self-interested sincerity of the high-school principal, is unsafe at its best, and deserves no further consideration at this point. "The method just

described (the certificate system) " says President Eliot, " is a corruption, or degradation, of a somewhat safer method of securing close connection between secondary schools and colleges which was first adopted twenty years ago by the University of Michigan."⁷ The lowest ebb of this system is perhaps the case mentioned by Professor Brown where " students bearing the personal certificates of a former teacher concerning studies satisfactorily completed will be given credit for the work they have done."⁸ The diploma system, on the other hand, while it has some disadvantages, at the same time possesses some genuine merits.

The diploma system is now the prevailing method of admission among the State colleges of the West. It has now been in use long enough to have been thoroughly well tried. The writer has been through most of the literature on the subject by leading educators, as well as various documents of colleges in which the system has been tried, and the following are the chief arguments in support of the system: (1) The diploma system, with the visitation and inspection involved, brings the college and the secondary school into a closer reciprocal relation. The benefits derived by both institutions from such a constant interrelation are many. The step from school to college is less obstructed by arbitrary barriers, and the whole educational system, therefore, approaches closer to a unity. The frequent presence of college officials in the schools stimulates the schools to better work, encourages teachers, gives school boards some valuable professional opinion on their schools; and often students are encouraged to go to college who would not otherwise do so. Frequent inspection of preparatory schools by college officers gives the latter a better insight into the work of secondary education, and a consequent interest in and appreciation of the problems in that field. As Dr. Canfield says,⁹ this is " a recognition due from the university to

7. *Educational Reform*, 214.

8. *Secondary Education*, monograph No. 4, in *Education in the United States*, p. 26.

9. Canfield, James H., *Educational Review*, V., 291.

workers in other parts of the field." (2) The diploma method is regarded by many as the most adequate and the fairest test of a student's fitness for college. It is most adequate, because the decision is determined by the carefully preserved records of the student's work for a period of four years; and it is fairest, because the decision falls on the right shoulders—on the master, who is better able to judge of a boy's capabilities than a stranger in a higher institution whose only knowledge of the candidate comes from an examination paper written under peculiarly abnormal conditions. (3) The diploma method is also fairer to those not going to college, for it relieves teachers from devoting an inordinate amount of time to coach up for the entrance examination the few who are going to college; and it gives teachers an opportunity both to *educate* these and to devote proper attention to the deserving majority. (4) The general verdict is that by the diploma method of admission colleges really secure a better grade of students.¹⁰

The disadvantages of the diploma system as it is now managed are these: (1) The privilege of accrediting can be easily abused by both schools and colleges. In places where the certificate of the high-school principal is necessary in addition to the diploma the importunities of parents and committeemen may warp the judgment of the principal. (2) Where inspection is not frequent, schools which have really deteriorated may be retained on the accredited list. (3) Admission by diploma fosters a tendency to avoid tests of accurate scholarship. (4) It is impossible to maintain adequate safeguards about the system when it embraces a large number of schools at long distances away. The visits of the faculty cannot be frequent enough. At the University of Michigan inspection formerly occurred annually; now it occurs only once in three years. The examination of schools is not searching enough, and is usually made by college specialists rather than by men familiar with the problems of the secondary school. In speaking of the inadequacy of the inspection of schools where the diploma sys-

10. Testimony of Cyrus Northrop, James H. Canfield, C. K. Adams, B. A. Hinsdale.

tem is at its best President Eliot says: "I went into a Chicago school and spent a brief time in a number of recitations here and there about the building. On leaving I was asked by the principal, 'Will Harvard take my certificate?' When I answered that I had been there too short a time to know anything about the school, he told me that the Michigan professor had been there even a shorter time, and yet his certificate was received at Ann Arbor."¹¹ (5) The proper inspection of the school entails on the higher institution a great burden. Probably the most efficient system of school inspection is maintained by the University of California. There the work is carried on by a committee representing the chief departments of secondary instruction—English, Latin, history, mathematics, and physics—and each school is visited annually. When possible, professors who have had teaching experience in secondary schools are sent. The California system has more safeguards than any other, but at an elaborate expenditure of time and money. Professor Brown estimates that the "aggregate of time required each year by all departments for the purpose of the examination of schools is not far from three full academic years," and that there is an "approximate total cost for services and traveling expenses of between \$8,000 and \$9,000 annually."¹² In the case of any college which maintains an extensive accrediting system, and attempts to conduct it in a thorough and systematic manner, the expense is considerable.

Let us consider a little further the arguments for the diploma system, particularly the second and fourth. Those who maintain that admission by diploma is the most adequate and the fairest test, mean, doubtless, that it is more adequate and fairer than the entrance examination as it was formerly, and is even now, frequently conducted. Nobody denies that. The college entrance examination, as it existed a decade or two ago, before there was any general agreement among colleges as to what it

11. *Proceedings of the New England Association of Colleges and Preparatory Schools*, 1892, 33.

12. *Secondary Education*, monograph No. 4, in *Education in the United States*, p. 28.

should be or how conducted, when each institution was sufficient in itself and was an absolute dictator among a small coterie of preparatory schools, when the examination papers of each college were chiefly bundles of the eccentricities of one or two superannuated professors, full of tricks and puzzles, appealing to memory and guesswork, then the entrance examination was truly an abnormal affair. Our study of the history of admission requirements, however, has shown that one of the prominent tendencies during the last few years has been a change in the character and conduct of the entrance examination, so that many of its former objectionable features have been eliminated. Since 1886 school and college associations have been endeavoring to secure a reasonable uniformity. The recent organization of the examining board of the Association of the Middle States to some extent has removed the affair from the hands of colleges and individual professors. Examinations are gradually becoming tests of acquired power quite as much as of acquired facts. In the better institutions examinations are divided into preliminary and final, so that the physical and mental strain is not nearly so severe as formerly. The method pursued by larger colleges of conducting examinations in different parts of the country saves the student considerable trouble and expense. An able-bodied boy who has been well prepared, and has been trained to think independently, ought not to fear the entrance examination as it is now conducted by leading colleges. He has the additional assurance also that his success will reflect credit on his teachers, his school, and himself. What is more, the feeling of confidence and of power in himself which comes to a young man who successfully overcomes an obstacle like an entrance examination is no slight advantage. The examination, avoiding, as it does, the influences of the personal friendship between examiner and examinee, and the importunities of parents and friends, is probably as fair a test as any. The late Dr. Bancroft, principal of Phillips Academy, at Andover, Mass., who had a wide experience in preparing boys for college, said: "The modern methods of setting examination papers, of examining and

estimating them, of recording and announcing the results, are such that mistakes are few in number, and real injustice of any magnitude is rare. As a rule, the right men are conditioned, and in the right subjects, and the right men are passed, and the right credits are given."¹³ So far as the adequacy and fairness of the entrance test is concerned, it matters little to a good school, or to a good student from any school, whether the method of admission is by diploma or by examination.

The fourth argument, that better students are secured by the diploma system of admission, is probably based on an incorrect interpretation of data. In an article by Lucy M. Salmon on different methods of admission to college there is a table showing the number of students admitted by certificate and by examination to twelve colleges in 1891.¹⁴ According to this table, there were less than one-third as many admitted by examination as by certificate. That was ten years ago. With the subsequent spread of the certificate system it is likely that the proportion is now about one to five. The small number of students entered by examination is not a fair basis for comparison, especially when many of them are either those irregularly prepared or those unable to receive a certificate from their school. The claim that the diploma method of admission secures better students must, therefore, be accepted with some modifications.

The two remaining arguments for the accrediting system are the strongest, and on these the merits of the system rest. That this system, with the inspection, visitation, and correspondence it involves, does bring secondary and higher education into closer articulation to the advantage of both cannot be denied. Even President Eliot concedes this point.¹⁵ Also, the college influences the entire conduct of the school in a broader and more vital way than by an examination, the chief purpose

13. In a letter to Professor Clifford H. Moore, cited in *School Review*, IV., 314.

14. *Educational Review*, VI., 234. Unfortunately, Miss Salmon has failed to give the source of these statistics. For that reason the table is not here quoted.

15. *Educational Reform*, p. 216.

of which, from the position of the college, is to prevent unpromising material from obtaining admission.

An equally important merit of the diploma system is that it is fairer for the entire school than the examination system. That is to say, with the college examination removed, mere preparation for college becomes a less prominent object. Other than preparatory students and other than preparatory subjects can receive their share of attention. In this respect the diploma system has encouraged a desirable reform in admission requirements, from the point of view of the public high school at any rate. There are altogether too many schools in this country whose aim and inspiration come exclusively from the admission examination of some college. It is a notorious fact that in many excellent fitting schools non-preparatory students are intentionally neglected. Their course of study is made up often of scraps of subjects, ill taught, lacking in continuity, almost worthless for either information or discipline.

In States where there is a well-organized and efficiently supervised system of secondary education the diploma system of admission to college under adequate supervision is not an undesirable thing. It removes an artificial barrier between the high school and the college, and thus preserves the unity of a complete scheme of public education from the kindergarten to the university. As a method for general adoption, however, the diploma system cannot be safely recommended. In the first place, there are too many weak colleges in the United States which will not turn away an applicant for admission under any considerations. Secondly, there is no homogeneity among our secondary schools. Thirdly, high-school teachers need be neither scholars nor college graduates, nor are they appointed with sufficient care.¹⁶ When we can be sure that every graduate of a secondary school has spent four years beyond the grammar

16. In 1898 of 519 secondary-school principals in New York State only 51 per cent. were college graduates. *University of the State of New York, Report of the Directors* for 1898, 337. In the country at large the percentage of high-school principals who are college graduates is probably still lower.

school in liberal study, under teachers who are at least college graduates and chosen with care, and when the whole system of secondary education is controlled and inspected by the national government or by mutual agreement among colleges, then admission to college by diploma as a general policy will be both safe and desirable. A national board for the inspection of secondary schools would effect much toward leveling up and unifying secondary education, and eventually clear the way for the general adoption of a uniform and national system of certification.*

* There is now an effort being made by the New Jersey High School Teachers' Association to have a State inspector of high schools appointed. This is another movement in the direction of uniformity in secondary schools.

CHAPTER V

ATTEMPTS OF SCHOOL AND COLLEGE ASSOCIATIONS TO PROMOTE
UNIFORMITY IN COLLEGE ADMISSION REQUIREMENTS

A GLANCE at the table on page 53 will show that in 1870 there was no substantial agreement among leading colleges as to what subjects and how much should be required for admission to the A. B. course. Greek, Latin, and mathematics were almost universally required to some extent, but the amounts and character of the requisition varied widely. Beyond these subjects there was an ill-defined penumbra wherein no uniformity in either subjects or amounts prevailed. In the field of uncertainty were geography—physical and descriptive; history—ancient and United States, and English—grammar, reading, and composition. With the development of parallel courses diversity in admission requirements increased.

Such diversity was, of course, due to isolation among the colleges, a feeling of self-sufficiency, and a consequent lack of any unity of action. Not only did each college have its own set of admission requirements for its own circle of preparatory schools, but also one professor would in some cases control for a number of years all the entrance conditions of his particular department. Consequently, the idiosyncrasies of both individual colleges and of individual professors had free play. Some weak colleges, especially desirous of students, had low requirements for admission. Others, priding themselves on their reputation of doing thorough work, maintained a high standard. In some colleges, where the classics were considered of unusual importance, the terms of admission in Latin and Greek would be high, and for the same reason, perhaps, the requirements in mathematics for admission to another college would be high. And in any college the professor of a particular department might be a man of influence in the Faculty and suc-

ceed in maintaining a high standard of entrance requirements in his own subject. Moreover, in many cases there has always been a wide diversity between the regulations on paper and the actual enforcement of the same.

Such diversity in admission requirements has always been a source of perplexity and annoyance to secondary schools. Schools which send students to several colleges have been compelled to maintain more classes than they otherwise would, because the several colleges failed to agree on any policy of admission requirements, and petty and non-essential differences were insisted on, even in the more common subjects. In 1885 Dr. Bancroft, the late principal of Phillips Academy, of Andover, Mass., said: "Out of over forty boys for college next year we have *over twenty senior classes!*"¹ The consequences for the preparatory schools were (1) additional expense, (2) numerous small classes, (3) irregular and superficial work, and (4) an unnecessary amount of private coaching, with additional trouble for the teacher and expense for the student. Only schools which fitted for a particular college could be equipped to fulfill such conditions with any facility. Of course the worst sufferer from diversity in college entrance requirements was the public high school, because of the peculiar function of that institution.

As our historical discussion has shown, at the close of the eighteenth century there was a reasonably good degree of uniformity in admission requirements.² That was true, in fact, until the middle of the nineteenth century. But with the development of parallel courses, and the extension of the range of entrance subjects, diversity increased, and thus another factor arose to widen the gap between the school and the college. Consequently school and college associations were formed, and the express purpose of most of them, and a prominent issue with all of them, was to secure a better degree of uniformity in college admission requirements. The question of uniformity

1. *Proceedings of the New England Association of Colleges and Preparatory Schools*, 1885, 12.

2. See table, page 39.

Purp

became so serious an issue that by 1897 there were twenty-three college and other educational associations at work on the problem.³

The evils resulting from diversity in admission requirements were pointed out by many leading educators over thirty years ago, and the remedy often suggested was an agreement among leading colleges on a uniform standard.⁴ The first definite action in this direction, however, was made by a conference of New England colleges, held at Trinity College, Hartford, in December, 1879.⁵ At this conference a thorough study of the examination papers of several colleges was made, and the embarrassing diversities of practice were noted. The attention of this conference was mainly directed to the subject of English. The result was that the principle of the Harvard requirement was adopted, and the list of books already announced in the Harvard catalogue for 1881, 1882, and 1883 was accepted.⁶ A committee was also appointed to make up lists for subsequent years. The result was practical uniformity, on paper at any rate, in the admission requirements in English to all the New England colleges, with the exception of Yale. Conferences were also held in 1881 and 1882, when attempts were made to make entrance requirements in the classics and mathematics uniform, on paper at least. The result was a fair degree of uniformity in the stated regulations for admission to the classical course in the following colleges: Harvard, Yale, Brown, Dartmouth, Williams, Trinity, Amherst, Wesleyan, Tufts, and Boston University. If one examines the catalogues of any two of these colleges for 1884 or 1885 he will find a striking similarity in the statements of entrance conditions. The influence of these conferences beyond the limits of New

3. *Report of Commissioner of Education*, 1896-97, 457.

4. *Proceedings of the National Educational Association*, 1874, 45.

5. *Report of President of Harvard University*, 1886-87, 5.

6. For 1881 the list comprised: Shakespeare's *Hamlet*, and *Romeo and Juliet*; first two books of *Paradise Lost*; Goldsmith's *She Stoops to Conquer*, Irving's *Life of Goldsmith*, Hawthorne's *Our Old Home*, George Eliot's *Silas Marner*, Scott's *Abbot*.—*Catalogue of Harvard University*, 1880-81, 64.

England are not clearly traceable. Their chief advantage was that they brought into prominence the question of uniformity in college admission requirements and stimulated the formation of several permanent organizations in different parts of the country for the mutual interests of colleges and preparatory schools.

The parent organization of this character was the New England Association of Colleges and Preparatory Schools. This association was established at Boston in 1885. Its object was "the advancement of the cause of liberal education by the promotion of interests common to college and preparatory schools."⁷ Out of the association grew, in 1886, the Commission of Colleges in New England on Entrance Examinations. All the New England colleges, except five, united in the formation of this commission. Its object was "to devise means for securing greater uniformity in college admission examinations."⁸ The second organization of this character was the Association of Colleges and Preparatory Schools in the Middle States and Maryland. This organization grew out of the College Association of Pennsylvania, established in 1887, and extended to include the colleges of Maryland a year later. The present name and constitution of this association were adopted in 1892. The chief object of the organization since its establishment in 1887 has been "to consider the qualifications for candidates for admission to the colleges and the methods of admission."⁹ Other important organizations are the Association of Colleges and Preparatory Schools of the Southern States, organized at Atlanta, November 6, 1895, with an object stated similar to that of the Association of the Middle States; and the North Central States Association of Colleges and Secondary Schools, organized in the same year for the

7. *Official Report* of the second annual meeting, October 29, 1887, p. 7.

8. Report of special meeting of New England Association, January 7 and 8, 1887; *Proceedings*, 1887, p. 37.

9. *Proceedings* of first annual convention of College Association of Pennsylvania, 1887-88, 18.

purpose of establishing "closer relations between the colleges and the secondary schools of the North Central States."¹⁰ These four organizations, with the committee of ten on secondary-school studies, and the committee on college entrance requirements of the National Educational Association, have been the most influential in securing uniformity in admission requirements.

The first tangible results, beyond those local ones secured by the early conferences of New England colleges, were the uniform requirements in English, recommended by the Commission of New England Colleges in 1888. These recommendations were simply the crystallization and further extension of certain practices which were already existing in a few institutions.¹¹ The uniform requirements were promptly adopted by nearly all New England colleges. In 1894, under the auspices of the Association of the Middle States and Maryland, a committee, consisting of ten from that association, and five from the New England association, further revised the uniform English requirements. The recommendations made by the joint committee within three years had been indorsed by eighty-seven colleges in the United States.¹²

The earliest attempt at uniformity of national significance was the work of the "Committee of Ten" appointed by the National Educational Association in 1892. This committee was appointed in response to the suggestion of a committee of the National Council, which had been appointed two years before to consider uniformity in admission requirements. The report of this preliminary committee demonstrated that, notwithstanding the agitation which the subject of admission requirements had been receiving for over a decade, the only

10. *Proceedings of the North Central States Association*, 1895, p. 8.

11. The books recommended and the nature of the requisitions can be found in the *Proceedings of the New England Association* for 1888, and subsequent lists can be found in the catalogues of almost any leading college. The Harvard system has already been discussed. *Historical Discussion*, pp. 71-72.

12. *Report of Commissioner of Education*, 1896-97, 457.

results thus far secured had been State or local. The report presented a list of variations from a common standard of admission that could be selected at random from the catalogues of leading colleges.¹³ The committee recognized the necessity, accordingly, of organizing a movement toward securing national uniformity, and recommended the appointment of a committee representing colleges and preparatory schools, whose aim should be to suggest plans for securing a better degree of uniformity in school programs and in the requirements for admission to college.

Although a prominent object of the Committee of Ten was to secure a better degree of uniformity in college entrance requirements, yet they did not confine their attention to the details of adjustment between colleges and secondary schools. They attacked the phase of the problem which at that time demanded the most serious consideration. Their attention was devoted to a leveling up of secondary schools by the enunciation of certain educational principles which should underlie the course of instruction. The committee wisely proceeded on the principle that uniformity in admission requirements can follow only after the colleges have a sound basis upon which to build—that is, a uniform standard of secondary school work. Accordingly, nine sub-committees were appointed to examine the prevailing practices in secondary schools, and to make recommendations as to the content and methods of the common secondary subjects. Four suggestive programs were then

13. Variations from common standard existing in 1891:

Mathematics—Solid Geometry, Euclid, University Algebra.

Latin—Eight books of *Æneid*, six books of *Cæsar*, *Eclogues*, *Georgics*, *Ovid*, *Sallust*, excess of sight reading.

Greek—Four books of *Iliad*, excess of sight reading.

History, etc.—Bible History, Ancient Geography as a special study.

French—Not required by some colleges.

Science—Not required by some colleges. When required the variations run nearly through the list of sciences.

English—Not required by some colleges. When required there are troublesome variations.

—*Proceedings of the National Educational Association*, 1891, 311.

drawn up, each requiring twenty periods a week for four years, and so arranged that any thoroughgoing secondary school could maintain some one of them with the resources at its command. The committee further recommended that the character of instruction should be the same for students going to college as for those whose schooling is to end at the close of the high-school course; that each study should be pursued consecutively enough and thoroughly enough to yield the training it is calculated to give; that all the main subjects thus treated might be regarded "of equal rank for the purposes of admission to college or scientific school;" that every school program should provide for continuous instruction in the four main fields of knowledge—language (including English), mathematics, history, and science—in order that every student may "exhibit his quality and discover his tastes," and that "the satisfactory completion of any one of the four-year courses of study embodied in the foregoing program should admit to corresponding courses in colleges and scientific schools."¹⁴

The chief contribution of the report of the Committee of Ten to the problem of uniformity in college admission requirements was that it provided a means whereby secondary schools could, with the resources already at their command, rise to a common standard of excellence. The question remaining was: How shall the colleges adjust their requirements to the conditions in the secondary schools? This question has been answered by the independent action of a few progressive colleges, by the recommendations of the "Committee on College Admission Requirements," and by the formation of the College Entrance Examination Board of the Middle States and Maryland.

The Committee on College-Entrance Requirements was appointed at the Denver meeting of the National Educational Association in 1895. The formation of such committee was the result of a paper read by Professor William Carey Jones on "What Action Ought to be Taken by Universities and Secondary Schools to Promote the Introduction of the Pro-

14. *Report of the Committee on Secondary School Studies*, p. 53.

grams Recommended by the Committee of Ten?"¹⁵ The plan of work outlined for this committee in 1896 was (1) the investigation of existing entrance conditions, and (2) the "recommendation of ways and means of securing such uniformity in extent and method as will be conducive to the best interests both of higher and of secondary education." It is not necessary to discuss the organization of this committee further than to say that it consisted of a general committee of twelve and sub-committees representing each of the ordinary secondary-school subjects.

The first work of the committee was to consider the existing conditions in college admission requirements. The entrance terms of sixty-seven leading colleges were collected and tabulated; and in the selection of institutions it was intended (a) to cover all sections of the country, and (b) to include all types.¹⁶ The tabulated statements were presented in the preliminary report of 1896, and they are valuable as showing the degree of diversity in college entrance requirements that then existed, and the imperative demand for some sort of national procedure for the relief of the preparatory schools. The final report was submitted in 1899, and it was the result of four years of thorough study and frequent conferences. The fact that this report was the result of the consensus of the opinion of nearly one hundred and fifty experts in the field of secondary and higher education gives it a value unprecedented.

The convictions and conclusions of the general committee were set forth in fourteen resolutions. These are as follows:

"I. *Resolved*, That the principle of election be recognized in secondary schools.

"II. *Resolved*, That the requirements for admission to technical schools should be as extended and thoro as the requirements for admission to college.

"III. *Resolved*, That the teachers in the secondary schools

15. *Proceedings of the National Educational Association*, 1896, 558.

16. These tables can be found in the *School Review* for 1896, 341.

should be college graduates, or have the equivalent of a college education.

"IV. *Resolved*, That we favor a unified six-year high-school course of study, beginning with the seventh grade.

"V. *Resolved*, That in the interpretation of the recommendations of this committee concerning the subjects to be included in the secondary-school program and the requirements for admission to college, for which credit should be given, it is distinctly understood that all secondary schools will not offer opportunities for the pursuit of all these subjects, and that the colleges will select those only which they deem wise and appropriate.

"VI. *Resolved*, That, while the committee recognizes as suitable for recommendation by the colleges for admission the several studies enumerated in this report, and while it also recognizes the principle of large liberty to the students in secondary schools, it does not believe in unlimited election, but especially emphasizes the importance of a certain number of constants in all secondary schools and in all requirements for admission to college.

"*Resolved*, That the committee recommends that the number of constants be recognized in the following proportion, namely: four units in foreign language (no language accepted in less than two units), two units in mathematics, two in English, one in history, and one in science.

"VII. *Resolved*, That the colleges will aid the secondary schools by allowing credit toward a degree for work done in secondary schools, beyond the amount required for entrance, when equal in amount and thoroughness to work done in the same subjects in college.

"VIII. *Resolved*, That for students who have met a definite requirement in any science, and who continue the subject in college, it seems to us desirable that there be provided a suitable sequel to the school course in continuation of the study; such students being in no case placed in the same class with beginners.

"IX. *Resolved*, That we approve of encouraging gifted

students to complete the preparatory course in less time than is required by most students.

"X. *Resolved*, That in general we recognize in schools the admissibility of a second year in advanced work in the same subject, instead of a second year in a related subject; for example, two years in biology instead of one year in biology and one year in chemistry, where local conditions favor such an arrangement.

"XI. *Resolved*, That it is desirable that colleges should accept, in addition to the year of United States history and civil government already recommended, at least one half-year of intensive study of some period of history, especially of the United States.

"XII. *Resolved*, That we recommend that any piece of work comprehended within the studies included in this report that has covered at least one year of four periods a week in a well-equipped secondary school under competent instruction should be considered worthy to count toward admission to college.

"XIII. *Resolved*, That it is desirable that our colleges and universities should accept as a unit for admission a year's work in economics, including under this head a course in elementary political economy, supplemented by adequate instruction in commercial geography and industrial history.

"XIV. *Resolved*, That we recommend an increase in the school day in secondary schools, to permit a larger amount of study in school under school supervision."

The work of the Committee on College-Entrance Requirements is of utmost importance for five reasons: (1) It supplemented and applied the work of the Committee of Ten, and thus lent additional significance to both reports; (2) it met squarely the problem of admission requirements for the first time from a national point of view; (3) it took cognizance of existing conditions, and crystallized into workable principles what is best in current practice; (4) it arrived at conclusions which are national and everywhere practicable, and (5) it enlisted the services of the best thinkers and actors in the field

of education. The almost universal approval with which the report has been received both testifies to the sanity of the report and augurs well for its future usefulness. The absence of any considerable amount of adverse criticism may be due to the fact that there is nothing novel in a national report of this character, or, what is more likely, to the fact that the resolutions of the committee are in harmony with the latest educational ideas. The most appropriate criticism that can be made on the report in general is silent approbation. Several of the resolutions, however, call for separate discussion.

We wish to consider especially resolutions I., III., VI., and XII. The first resolution, "That the principle of election be recognized in secondary schools," is simply the endorsement of a practice already in vogue in most large and progressive high schools. This practice is not only healthy, in view of the differing tastes of boys, but it is also necessary. It is necessary because of the constantly increasing demands of both college and public. In order to keep abreast of intellectual progress, and to encompass at all adequately the widening range of knowledge, colleges were compelled, half a century ago, to adopt the elective system. And, as we have frequently noticed, a tendency once started in the college is bound to percolate down into the lower strata of the educational system. High schools, at the same time, have had to yield to the pressure of the social demand for a broader range of studies, particularly of an industrial, commercial, and scientific character. The question, therefore, is no longer whether the principle of election should obtain in the secondary school, but how and to what extent it should be pursued. The question is met by the sixth resolution of the committee. While the committee "recognizes the principle of large liberty to the students in secondary schools, it does not believe in unlimited election, but especially emphasizes the importance of a certain number of constants in all secondary schools." The position of the committee is wise, in view of the youth and instability of high-school pupils. Instead of permitting a boy to choose at random from a miscellaneous mass of unrelated subjects, they

recommend choice within certain correlated groups. These groups, as well as the principle involved, closely harmonize with a thesis already discussed in this paper. The ideal in election, in view of existing conditions, is elasticity with organic unity.

The third recommendation, "That the teachers in the secondary schools should be college graduates, or have the equivalent of a college education," ought to be almost axiomatic. Considerably more than a college education is required of all teachers in the secondary schools of Germany. But in New York, one of our leading States educationally, only fifty-one per cent. of the secondary school principals even are college graduates.¹⁷ The recommendation, therefore, is not a mere platitude to which all assent. In view of actual conditions, it is as advanced and radical as almost anything the committee suggests. Before we can expect any general improvement in the secondary schools we must have better equipped teachers. Quite as much depends upon the quality of the teacher as upon the subject studied. The statement of President Garfield, that, so far as he was concerned, a log with himself on one end and Mark Hopkins on the other might serve all the purposes of a college, involved a fundamental truth. Doubtless much of the disciplinary value attributed to the classics in the past was due quite as much to the fact that those subjects were better taught than those of more recent introduction as that they had any greater intrinsic power to strengthen the mind. The committee might well have added to this excellent recommendation, also, that teachers in the secondary schools be professionally trained.

The twelfth recommendation is simply an endorsement of the principle of free election in admission requirements, which has already been discussed. It puts all subjects on an equality so far as their relative value in admission requirements is concerned. It makes no unfair discrimination in favor of the classics, or of mathematics, but proceeds on the principle that all standard subjects well taught for the same length of time

17. See page 124, note 16.

in any good secondary school should be of equal weight in determining a student's fitness for a college course. The objection may be raised that technical and industrial subjects are not included in the resolution. The omission is due to the fact that no conferences were held in those subjects; the committee was mainly concerned with the ordinary college entrance subjects; for the difficulty of diversity has been chiefly in connection with these. The action of the committee in this respect cannot be construed to mean a discrimination in favor of the subjects represented in the report. The resolution would doubtless apply as well to industrial and technical studies, so far as they count for admission to technical and industrial institutions. This recommendation, as well as several others of the committee, places considerable responsibility upon secondary schools. This attitude is certainly commendable. It is a recognition which is due to the improvement taking place everywhere in secondary education; and confidence thus placed in the work of the schools can prove a powerful incentive to such improvement. Too long have the colleges regarded the secondary schools, particularly the public high schools, as able to prepare only a few students in only a few subjects. Mr. Samuel Thurber, in a discussion of this report, says: "What the college now by its prescriptions gets is the result of certain narrowly specified teachings, whose main feature has usually been the practice of a severe economy of effort in excluding all subjects of thought that will not tell in a momentary test."¹⁸ The endorsement of the twelfth recommendation by the colleges would mean that all subjects in good high schools receive equal recognition in admission requirements.

The committee make a careful distinction between the terms *program*, *curriculum*, and *course of study*. In the report these terms have the following connotation: (1) *Program of studies* includes all the studies in a given school, (2) *curriculum* means the group of studies arranged for any pupil or set of pupils, (3) *course of study* means the quantity, quality, and method of work in any given subject of instruction. The

18. *School Review*, VII., 399.

most valuable part of the report bears upon the *course of study*. A criticism frequently urged against the report of the Committee of Ten was that it suggested programs which were impracticable in many places. The Committee on College Entrance Requirements did not attempt to construct programs, or to suggest curriculums. Each sub-committee recommended what it regarded feasible and practicable courses of study in its respective subjects, and these courses are stated in so many national units as "norms." A "norm" is a year course in some accepted secondary-school subject—a sort of unit of measure of both quantity and quality. The committee believes that absolute uniformity in secondary-school programs or curriculums is both impossible and undesirable. What they do attempt is to "set forth a series of interchangeable units of substantially the same value as will meet with acceptance everywhere. Local conditions and traditions may give rise to differing groups of college entrance requirements, but within those groups the several units should have the same value."¹⁹ For instance, a boy who has done a year's work in history of sufficient quantity and quality in one school should receive credit for a year's work in another school. In other words, the "norms" are a kind of national educational currency, or negotiable notes, that will pass in any school which maintains courses approximately equivalent in quantity and content to those suggested by the various sub-committees.

So far as admission requirements are concerned, it is not the desire of the committee "that all colleges should make the same entrance requirements, nor is it to be expected that all schools will have the same program of studies. What is to be desired, and what the committee hopes may become true, is that the colleges will state their entrance requirements in terms of national units, or norms, and that the schools will build up their program of studies out of the units furnished by these separate courses of study."²⁰ And this is precisely where the work of this committee is an advance over that of the Committee of

19. *Proceedings of National Educational Association*, 1899, 648.

20. *Proceedings of National Educational Association*, 1899, 672.

Ten. The latter attempted to frame programs, the former has simply suggested what might reasonably go into a program, and has supplied a unit of measure. Of course there is nothing new in the idea that admission to college should be determined by so many units, or that a unit should stand for a subject pursued four or five periods a week for a school year. The distinct contribution of the report of the committee is the suggestion that the units should be of a definite and national value, that they form the material from which all secondary-school programs may be composed, and that they be accepted at par by all schools and colleges. Such an arrangement would provide for greater flexibility in school programs and in admission requirements, and would secure greater simplicity all around. At the same time it would meet all legitimate claims of variation resulting from differences in environment and in tradition. For instance, it is possible that a small college, which does thorough work, but to a less extent than a larger one, finds it necessary to maintain a lower standard of admission requirements. The small college, then, can accept twelve instead of fifteen units, perhaps, and in that way it can be of real service to the rural high school, which can do only twelve units of good college-preparatory work. To sum up, the plan of the Committee on College Entrance Requirements furnishes a feasible means of securing elasticity, and at the same time uniformity, in secondary schools; and it also provides for natural articulation between schools and colleges.

The report of the Committee on College Entrance Requirements has pointed out the conditions under which uniformity in admission requirements is possible. Now, how is uniformity to be put into general practice? Colleges may agree even on paper upon a uniform requisition in certain subjects, but experience has taught that this is absolutely no guarantee of its common enforcement. For instance, the New England colleges for the past decade have agreed upon a uniform statement of entrance requirements in English, but anybody who has had the experience of preparing boys for college during that period is well aware that it is not enough to know that a certain boy

is going to take an examination in the so-called uniform English requirements; he must also know right early what college is to administer the examination. A uniform regulation is one thing; but its interpretation and application is another. As Dr. Butler says: "To establish uniform requirements without uniform administration would leave the problem unsolved."²¹ The recent formation of the College Entrance Examination Board of the Middle States and Maryland bids fair to solve the problem.

The idea of a common examining board is not a new one. It was suggested by President Eliot nearly twenty years ago and has been reiterated by him and others since.²² A resolution providing for the establishment of such a board was introduced by Professor Butler at a meeting of the Faculty of Columbia College on December 22, 1893, and was passed by a unanimous vote in 1896. Little was accomplished, except correspondence, until 1899, when at a meeting of the Association of Colleges and Preparatory Schools of the Middle States and Maryland, on December 1, Dr. Butler introduced a set of resolutions providing for the establishment of a "Joint College Admission Examination Board" for the territory represented by the colleges in the association. On December 2 the following resolutions were adopted unanimously:

"*Resolved*, That this association urges the early establishment of a joint college admission examination board, composed of representatives of colleges and of secondary schools in the Middle States and Maryland, which shall:

"(1) Endeavor to bring about as rapidly as possible an agreement upon a uniform statement as to each subject required by two or more colleges in turn.

"(2) Hold, or cause to be held, at convenient points, in June of each year, a series of college admission examinations, with uniform tests in each subject, and issue certificates based on the results of such examinations.

21. *Educational Review*, xix, 71.

22. At a meeting of the New England Association of Colleges and Preparatory Schools; *Proceedings*, 1885, 16.

"Resolved, That in case such board be established before the next meeting of this association, the executive committee be empowered to designate the representatives of secondary schools to serve upon such board until December 1, 1900.

"Resolved, That the several colleges in the Middle States and Maryland be requested by this association to accept the certificates issued by such joint college admission examination board, so far as they go, in lieu of their own separate admission examinations."²³

The first work of the board was to agree upon definitions of the following entrance subjects: English, history, Latin, Greek, French, German, mathematics, physics, and chemistry; and this year Spanish, geography, and drawing have been added. The definitions accepted were those suggested by the various committees of the National Educational Association, except in the cases of English and drawing. In this way the work of the examination board will be a direct application of the suggestions of the Committee on College Entrance Requirements. In connection, therefore, with the work of the Committee of Ten and the Committee of Twelve, it is the crowning effort towards uniformity in college entrance requirements and towards a closer articulation between colleges and secondary schools.

Let us examine the points involved in the work of the College Entrance Examination Board. First, a few details of administration. For each subject there is a committee of three examiners; the chief examiner and one other are college teachers, the third a secondary-school teacher. After the papers are made out they are submitted to a committee of revision, consisting of the chief examiners and the five secondary-school representatives on the board. They are then sent by the secretary to numerous points where the examinations are to be held. This year examinations may be held in nearly all principal cities in the United States, as well as in

23. Association of Colleges and Preparatory Schools of the Middle States and Maryland; *Proceedings*, 1899, 138.

foreign countries.²⁴ After the examinations the books are distributed by the secretary to the readers, who are also selected from both colleges and secondary schools. Certificates are sent to candidates who pass. No book is finally marked below sixty until it has been examined by two readers. All books marked below sixty are held for two years, but, on the request of the candidate, are sent to the authorities of any college which the candidate wishes to enter. The details of administration show how carefully wrought out the whole scheme is, and how absolutely fair all conclusions ought to be. Two advantages are plain to see. The work of the board relieves college professors from the humdrum task of framing and correcting examination papers. It also avoids much of the dispute between high-school teachers and college officials as to whether this or that boy was rejected fairly.

A good many small objections have been urged against the project. One is that it gives hard and fast mechanical results, and does not afford the opportunity for reasonable and just discretion, as does the method of examination by individual colleges. The only call for discretion is where a particular candidate fails to pass. In that case the college which that candidate intends to enter has the privilege of re-examining his paper and of using whatever leniency it wishes. Another objection is that an unfair advantage is given to those secondary schools from which examiners and readers are selected. This cynical criticism involves both the honor of reputable men and the judgment of the board, and deserves no refutation. Objections have also been raised to the character of the examination questions, particularly in two subjects, and to some of the ratings. These, however, are simply matters of administrative detail, involve no principle, and can be easily remedied. The examinations have been regarded, for the most part, thorough, searching and fair; and the general verdict is one of approval.

24. In June, 1902, examinations were held under the auspices of the Board in 130 places, and 1362 candidates were examined. This is an increase of about forty per cent. over the previous year.

This paper is more concerned with the general principles of the plan than with administrative details. During the discussion which resulted in the establishment of the examination board President Eliot declared that such a movement would make "an immense contribution to American education." That contribution has been made by the successful formation of the College Entrance Examination Board, and it consists in the fact that a means has been provided for *enforcing* to a large extent uniformity in college admission requirement. The distinct advantages which can confidently be expected from the successful operation of such a scheme are these:

I. Fairer tests and a fairer judgment of results will be given than hitherto. The papers are made out and corrected by a well-organized body of able educators, carefully chosen because of their ability and experience in those matters. Again, exclusive interests of neither colleges nor secondary schools prevail, because the board is so constituted that the demands of both institutions are recognized.

II. Individuality, as well as uniformity, is provided for. Any school can choose what subjects it is best equipped to teach, and any college is left free to say what subjects it will absolutely require.

III. The fact that the board is composed of both college and school men means actual rather than theoretical co-operation; and, therefore, one of the strongest arguments in support of the "accrediting system" applies with equal force to the uniform examination system. Also, the continual exchange of opinions among the college teachers enlisted will doubtless do much towards promoting uniformity in the entrance conditions of the colleges represented.

IV. An agreement, at least among the colleges which accept the certificates of the board, upon a uniform statement of the definition of the several admission subjects is assured.

Moreover, V., the establishment of this examination board has finally supplied a means of *enforcing* uniform definitions.

The establishment and successful operation of the College

Entrance Examination Board has been made possible by a long series of propitious circumstances. For the past fifty years a tendency toward uniformity in entrance requirements, at least in the long-established subjects, has been slowly developing, regardless of the work of the various school and college organizations. The efforts of the New England Association, of the Committee of Ten, of the Committee of Twelve, and of the Columbia Conference of 1896 have not only accomplished some important results, but have continually agitated the problem of college admission requirements, and have cleared away the underbrush, so to speak, for the present movement. Six years ago President Eliot said that there were three important needs regarding college admission requirements. These were: "First, that we may expect a large addition to the old-fashioned requirements for admission; next, that we need a mode of attaching to the new subjects severally, as to the old, a just valuation for admission purposes, and, thirdly, that we shall need some method capable of securing tolerably uniform enforcement of the new and old requirements."²⁵ These three needs have all been fulfilled. The development of the elective system in both colleges and secondary schools, as well as the influence of the reports of the Committee of Ten and of the Committee of Twelve, has supplied the first need. The individual effort of a few leading colleges and the work of the Committee of Twelve have met the second. The establishment of the College Entrance Examination Board of the Middle States and Maryland is fulfilling the third. The influence of the examination board promises to become national.²⁶ We have learned from the secretary that its certificates are already honored by nearly every college in the United States. Harvard University is a remarkable exception, the more remarkable


25. *Educational Reform*, 389.

26. Since this was written a resolution has been passed by the Examination Board inviting New England colleges to join, with the promise that, if the invitation is accepted, the name will be changed by dropping the words, "of the Middle States and Maryland." *Educational Review*, October, 1902.

6s
Ye because the idea of such a project apparently originated with President Eliot. One reason President Eliot has to offer is that they are waiting to see how the scheme works. They are evidently satisfied with the results, but instead of co-operating and lending their valuable influence to the project already on foot, members of the New England Association are planning a similar board, which is intended to improve on that of the Middle States in respect to a few non-essential details of administration.

CONCLUSION

IN the introduction to the second part of this dissertation it was shown that the important problem involved in college admission requirements was that of a closer articulation between the high school and the college. There have been, as we have seen, several distinct attempts to secure such articulation. Colleges have widened the range of entrance subjects, and have made their terms of admission more liberal. Many institutions have sought to bridge the gap between the college and the school by admitting students on the diploma of the latter. Through the efforts of school and college associations uniformity in admission requirements has made good progress. Much has been done, as much, perhaps, as could well be expected from mere mechanical attempts to fuse two phases of our educational system when the representatives of each phase have looked upon the problem of education from an entirely different point of view. The current expression, "preparation for college and preparation for life," gives us the key to the situation. The constant employment of that happy phrase indicates clearly, it seems to me, that there is still doubt in the minds of many educators that preparation for college can at the same time be preparation for life, doubt that a college career is, or should be, life in its richest and fullest sense. The expression implies that a boy preparing for college is pursuing a radically different course from that of the boy who is to enter the ranks of citizens a few years earlier. The assumption is that the one is preparing for a life of cultured ease, the other for a career of practical usefulness.



That there has so long been a distinction between preparation for college and preparation for life is due to the erroneous idea that certain studies are valuable merely for culture and others are valuable for their practical usefulness, and that the

Note

No 10
former afford a certain discipline which the latter fail to give. It is clear that too narrow an interpretation has been put upon the idea of culture. Culture is development of the individual. What assists the development of one, however, may arrest the development of another. One person may get the richest sort of culture out of manual training, while another finds the classics best adapted to his peculiar needs. The weakness of the humanistic curriculum of the early college was that culture was synonymous with a knowledge of Latin and Greek. Students who seemed not to profit well by such discipline were considered hopeless cases, and were early relegated to the class of artisans. When one of the latter happened to succeed well, in spite of intellectual ostracism, he was apologetically referred to as a "self-made man." Those who finally attained to the cultured class, so-called, were the product of a very severe selection, not a natural selection, but an artificial one. It was this sort of narrow thinking, and of acting in accordance thereto, that has made the American college such an exclusive and undemocratic institution, and one so difficult of access except to the favored few. As long as this conception prevails we shall doubtless continue to maintain a different course of study for the youth who is to go to college and for the youth whose schooling is to end with the high school. For the former we shall still prescribe a curriculum for so-called discipline, or culture, and for the latter we shall still patch together the remnants into an incoherent curriculum intended to afford him just enough information to get along well in life.

No 12
There are symptoms of a change, however. Educational principles and practices are undergoing a revolution. Manual, industrial subjects, and others, once scorned because useful, are gradually gaining a footing in our schools, and are winning the respect they merit. The fact that they suggest the work-a-day world and the soiled hand of toil is by no means to their discredit; and the growing conviction that the study which affords the most information and skill can yet give the best culture and discipline is establishing these subjects the more firmly. A change of attitude is apparent. As Mr. Dewey

says, we are beginning "to study the typical necessities of social life, and the actual nature of the individual in his specific needs and capacities." We are coming to act on the principle that the aim of education throughout its entire range is to adapt the individual for life in its fullest and most comprehensive sense, and that all studies which fulfill this purpose adequately are of equal value and dignity. When the aim of both the high school and the college conform to this principle, when both classes of institutions carve out their curriculums to this line, then there will be harmony of purpose, then the sequence in our educational system will be unbroken from the kindergarten to the university, then the joints between the several phases of the school system will be closer and less obtrusive, and articulation between the secondary school and the college, so far as the curriculum is concerned, will cease to be an important issue. No +

Three conditions are necessary to secure an ideal connection between the high school and the college. These are: (1) A fair degree of flexibility in high school curriculums and in the requirements for admission to college, (2) a reasonable degree of uniformity in the standard of our high schools and in the requirements of the colleges, and (3) adequate and fair tests of a student's intellectual, moral, and physical fitness to begin the college course. Already the tendency towards flexibility has become pretty general; in fact, there is danger that the movement may go too far, particularly in relation to the curriculum of the high school. In the direction of uniformity much progress has been made during the last five years. Unfortunately the movement towards uniformity in the standard of high schools has been local or sectional, while that towards uniformity in college entrance requirements tends to become national. The important issue to-day is the method of testing a candidate's ripeness for admission to college. X

The leading colleges recognize that almost any study which is worthy of a place in the high-school course is acceptable for admission to college. There is great diversity of opinion and practice, however, as to the method of testing. Some colleges still insist upon administering the entrance examination

themselves. Others intrust the whole matter to a board of examiners, like that of the Middle States and Maryland. Some colleges admit on certificate, some on diplomas; some admit students on probation, upon the recommendation of the high school principal; while several are contemplating the formation of a general certificating board. Without further discussing these various practices, we may say that educators are nearly equally divided in favor of the examination system, on the one hand, and of the diploma or certificate system, on the other. The advantages and disadvantages of the diploma system have been discussed in chapter IV. I want to say a few words, in closing, in favor of examinations.

There is a growing tendency of late which may operate seriously in lowering everywhere the standard of work throughout our schools. Reference is here made to the deplorable desire of students to evade all thorough tests of accurate scholarship and of acquired mental power. The practice, generally prevalent, of advancing pupils from grade to grade in the elementary schools, from the grammar school into the high school, and from the high school into college without examination is fostering that desire. In the schools of which the writer has charge the mere mention of the word examination produces among the pupils a thrill of terror. Whenever we wish to give a more formidable examination than a written lesson we must resort to some such evasive expressions as "long test," or "written exercise." Pupils feel it to be an imposition if they are required to reproduce any knowledge which they acquired over a month ago. And we are not alone in this, I suspect. It is doubtless true that by excusing a pupil from an examination we not only encourage superficiality, but we do him the positive harm of depriving him of a valuable review and of an equally valuable intellectual exercise. Now, if my argument regarding examinations in the lower schools has any soundness in it, it has still more weight in connection with the college and the method of admission thereto. Moreover, admission to college is a most important crisis in a young man's career. Of course there are some important exceptions (for

instance, those who intend to become professional base-ball or foot-ball players), but, as a rule, entrance to college is the issue which decides for a young man whether he shall follow a professional or, better, an intellectual, career, or one where intellectual training is a less important consideration. There are already too many fellows in our colleges who have got in easily and are there for no serious purpose. There are altogether too many people in the learned professions who have been permitted to mistake their callings, and who would be both happier and of more service to society if they were content to be efficient artisans or tradesmen. By no means offer any obstruction to those young men who, though penniless, have the stuff in them to profit by a college education. The more important consideration is to exclude all who have no serious purpose in going to college; and I believe that a thorough examination, administered judiciously, is at present the most effective means of maintaining the proper educational standards.

The important question remaining is: Who shall administer the examinations for entrance to college? The examination can be given by three authorities: (1) The individual colleges, (2) the various high and preparatory schools, (3) a general examining board, composed of representatives from both colleges and preparatory schools. If the examination is administered by the different colleges, the examinees will continue to suffer from lack of uniformity and the annoying idiosyncrasies of the various college examiners.¹ If preparatory school teachers give the examination, three dangers may result. First, there will be a tendency to lower the standards, resulting from the eagerness of high-school principals to make a good showing; secondly, the personal bias of the principal and the influence of parents may become important factors in determining the result; thirdly, the movement towards raising secondary schools to a uniform standard will be seriously hindered.² It

1. This matter is fully discussed in the first few pages of Chapter V.

2. Examination for admission to college by the preparatory-school authorities is practically what admission by certificate involves; and these arguments apply with equal force against the certifying system.

has been said, without further explanation, that college entrance examinations, administered by a general examining board, secure "mechanical results." Now, if "mechanical," thus used, means accurate, fair, safe, reliable, and performed with facility and dispatch, I heartily agree. Enough was said in chapter V. in regard to the advantages of this method of admission to college. It avoids the defects of other methods, and secures the positive advantages of a uniform standard and of fair and reliable results.

In conclusion let me say that, in view of the historical development of entrance requirements and the present status thereof, three provisions, or principles, seem best calculated to secure the satisfactory administration of college admission requirements. These are the following:

1. A good degree of flexibility, so arranged as to compel the student to make a judicious selection of subjects.
2. Reasonable uniformity in both secondary-school standards and in entrance terms.
3. Admission to college by examinations, these to be thorough, fair, uniform, and judiciously administered by a board of national recognition.

BIBLIOGRAPHY

I.

FOR THE HISTORICAL DISCUSSION.

Adams, C. K.

Review of Ten Broek's American State Universities, Origin and Progress, with North American Review; October, 1875.

Adams, H. B.

The College of William and Mary. United States Bureau of Education, *Circulars of Information*; 1887, No. 1.

Baldwin, Ebenezer.

Annals of Yale College in New Haven, Conn., from its Foundation to the Year 1831. New Haven, 1831.

Barry, J. S.

History of Massachusetts in the Colonial Period. Boston, 1856.

Blair, S.

Name of author not certain. *An account of the College of New Jersey*. 1764.

Boone, R. G.

History of Education in the United States. New York, 1890.

Bush, G. G.

History of Higher Education in Massachusetts. Bureau of Education, *Circular of Information*, No. 6, 1891.

Harvard, the First American University. Boston, 1886.

Butler, Nicholas Murray. Editor.

Education in the United States. A series of monographs; 2 vols. Especially monographs 4, 5, and 6. Albany, 1900.

Chandler, T. B.

Life of Samuel Johnson. New York, 1805.

Charter granted by their Majesties King William and Queen Mary to the inhabitants of the Province of the Massachusetts Bay in New England, 1692.

Clews, Elsie, W.

Educational Legislation and Administration of the Colonial Governments. New York, 1899.

College of William and Mary.

History of, Randolph, J., and English. Richmond, Va., 1874.

Columbia University.

Catalogues, 1848 to 1902.

Cornell University.

. *Catalogues*, 1868 to 1902.

Davis, Andrew, McF.

A Few Notes Concerning the Records of Harvard College. Cambridge, 1888.

Dexter, Franklin, B.

Yale Biographies and Annals; 2 vols. New York, 1896.

Dexter, F. B. Editor.

Literary Diary of Ezra Stiles. New York, 1901.

Dyer, G.

History of Cambridge; 2 vols. London, 1814.

Eggleston, Edward.

The Transit of Civilization. New York, 1901.

Farrand, Elizabeth, M.

History of the University of Michigan. Ann Arbor, 1885.

Fisher, G. P.

The Life of Benjamin Silliman, 1866.

Four American Universities.

Different authors. New York, 1895.

Fulton, John.

Memoirs of F. A. P. Barnard. New York, 1896.

Harvard College.

Statutes. In manuscript: 1642, 1655, 1686, 1731, 1734, 1743, 1778.

Printed in pamphlet form: 1790, 1798, 1807, 1814, 1816, 1820, 1825.

All these can be found in the archives of the Harvard University Library.

Harvard University.

Catalogues, 1825 to 1902.

Harvard University.

Annual Reports of President, 1870 to 1901.

Heywood, James, and Wright, Thomas, Compilers.

The Ancient Laws for King's College, Cambridge. London, 1850.

Holmes, Abiel.

The Life of Ezra Stiles. 1798.

Kingsley, W. L.

Yale College, a Sketch of Its History; 4 vols. New York, 1879.

King's College, later Columbia College.

Statutes for years 1755, 1763, 1785, 1810, 1811, 1816, 1821, 1827, 1836, 1843. In the custody of John B. Pine, New York.

Long Island Historical Society.

Memoirs; 2 vols. New York, 1867-1878.

Massachusetts Historical Society.

Proceedings. Volume cited V., XIV.

Mather, Cotton.

Magnalia Christi Americana. London, 1702.

McLean, John.

The College of New Jersey; 2 vols. Philadelphia, 1877.

Moore, N. F.

An Historical Sketch of Columbia College. New York, 1846.

Mullinger, James B.

The University of Cambridge. Cambridge, Eng., 1884.

Cambridge Characteristics in the Seventeenth Century. 1867.

New England's First Fruits.

A letter sent to England regarding the conditions in the Colony.

London, 1643. Published with *Old South Leaflets* as No. 51.

Newman, Francis W. Editor.

Huber's English Universities; 2 vols. London, 1843.

Peirce, Benjamin.

History of Harvard University. Cambridge, 1833.

Princeton Book.

Several authors. Boston, 1879.

Princeton College.

Statutes for years 1748, 1794, 1813, 1819, 1832, 1839, 1846, 1851.

Princeton University.

Catalogues, 1850 to 1902.

Quincy, Josiah.

History of Harvard University; 2 vols. Boston, 1860.

Richardson, C. F., and Clark, H. A. Editors.

The College Book. Boston, 1878.

Schwab, John B.

The Yale College Curriculum. *Educational Review*, June, 1901.

Schools as they were sixty years ago. *American Journal of Education*; vols., XIII. to XXX. A series of letters containing personal reminiscences of school life by eminent men.

Sherwood, Sidney.

The University of the State of New York. United States Bureau of Education, *Circular of Information* No. 3, 1900. Washington, 1900.

Shurtleff, N. B. Editor.

Records of the Governor and Company of the Massachusetts Bay in New England. Boston, 1853.

Sibley, John L.

Harvard Graduates; 2 vols. Cambridge, 1873.

Thayer, William R.

A Historical Sketch of Harvard University. Cambridge, 1890. Reprinted from the *History of Middlesex County, Mass.*

Tyler, Lyon G., and Brown, William G. Correspondence.

Nation, June 22, 1893; July 27, 1893.

Winterbotham, William.

American Schools and Education. 1796.

Barnard's *American Journal of Education*; XXIV, 241.

Woolsey, Theodore, D.

A Historical Discourse, pronounced before the graduates of the Yale College, August, 14, 1850. New Haven, 1850.

Yale College.

Statutes for years 1720, 1726, 1745, 1748, 1755, 1759, 1764, 1774, 1795, 1800, 1808, 1811, 1817, 1822, 1825, 1829, 1832, 1835, 1837, 1843. In the archives of Yale Library.

Catalogues, 1824 to 1902.

Reports on the Course of Instruction in Yale College by a Committee of the Corporation and the Academical Faculty. New Haven, 1828.

II.

FOR THE CRITICAL DISCUSSION.

Allen, Nathan.

The Old Academies.—The New Englander and Yale Review, XLIV., 104.

Association of Colleges and Preparatory Schools of the Middle States and Maryland.—*Proceedings*, 1888 to 1901.

Barnard, Henry.

Improvement in Colleges.—American Journal of Education, XXII, 435. The condition of the elective system in 1870 presented.

Butler, N. M.

The Reform of Secondary Education in the United States.—*Report of the United States Commissioner of Education*, 1892-93, 1448.

The Meaning of Education. Contains addresses touching on the subject of admission requirements. New York, 1900.

Brown, E. E.

History of Secondary Education.—*School Review*, VI., 357, 527, and VII., 36, 103, 286.

Carpenter, G. R.

Latin Versus the Vernacular in Modern Education.—*Columbia University Quarterly*, June, 1901.

College Entrance Examination Board of the Middle States and Maryland.

Documents 1 to 8, and *Report of Secretary* for 1901.

Committee of Ten on Secondary Schools of the National Educational Association.

Report, with discussions and full bibliography.—In *Report of the United States Commissioner of Education*, 1892-93, 1415.

Committee on College Entrance Requirements of the National Educational Association.

Preliminary Report.—*School Review* IV., 341.

Final Report.—*Proceedings of the National Educational Association*, 1899.

Educational Review. 1891 to 1902. Contains numerous valuable articles and editorials on secondary and higher education and on college entrance requirements.

Eliot, C. W.

Educational Reform. Contains several addresses touching on the subject of college admission requirements. New York, 1898.

Hadley, A. T.

The Education of the American Citizen. Contains several articles touching on the subject. New York, 1901.

National Educational Association.

Proceedings, including numerous addresses and discussions on the subject from 1876 to 1901.

New England Association of Colleges and Preparatory Schools.

Proceedings, 1885 to 1901.

North Central Association of Colleges and Secondary Schools.

Proceedings, 1895 to 1899.

Report of the Committee of Ten, *Bibliography.*—*Educational Review*, VIII., 103.

Report of the Committee on College Entrance Requirements.

Criticisms and discussions.—*School Review*, VII., 388.

Report of the United States Commissioner of Education, 1896-97, 457.

Contains admission requirements to 475 colleges and scientific schools tabulated, with preliminary remarks.

Report of the United States Commissioner of Education, 1899-1900.

Contains statistics of secondary schools tabulated, with preliminary remarks.

School Review, 1893 to 1902.

Contains numerous articles on secondary education and on admission requirements.

Snedden, D. S.

Flexibility in the Curriculum. 1901. Essay not yet published.

Vincent, G. E.

The Social Mind and Education. New York, 1897. Especially Chapters IV., V., and VI.

Ward, Lester, F.

Dynamic Sociology; 2 vols. New York, 1883. Especially Chapter XIV., on Education, gives exceptionally good point of view.





LIFE OF THE AUTHOR

BORN at Central Falls, R. I., 1874; graduated from the Central Falls High School, 1893; Brown University, Ph. B., 1897, A. M., 1898; teacher of English and history in the high school at Pawtucket, R. I., 1897-98; supervising principal at Seymour, Conn., 1898-1900; student in summer school, Columbia University, 1900; fellow in pedagogy, Teachers College, Columbia University, 1900-1901; student in Columbia University and teacher of Latin and German in Barnard School for Boys, 1901-1902; Ph. D., Columbia University, and Doctor's Diploma in Education from Teachers College, 1902.



10
11
12
13
14
15
16
17
18
19
20



UNIVERSITY OF CALIFORNIA LIBRARY
BERKELEY

Return to desk from which borrowed.

This book is DUE on the last date stamped below.

JUN 5 '53

JUN 1 1953 LU

21 Feb 64 JA

IN STACKS

FEB 7 1964

REC'D LD

JUN 1 - '64 - 1 PM

AUG 8 1967 26

RECEIVED

AUG 30 7-19 AM

LD 21-100m-7, '52 (A259-16) 476

LOAN DEPT.

MAY 4 1971 24

REC'D LD MAY 3 71 - 2 PM 8 5

Due end of SPRING Quarter
subject to recall after MAY 19 '72 3 0

JUN 29 1972 7 1

REC'D LD JUN 5 '72 11 PM 5

REC. CIR. NR 13 70

Due end of FALL Quarter
subject to recall after

RETURNED TO

OCT 19 72 11

OCT 30 1972

APR 11 1976

LOAN AHC

REC'D LD JUN 19 70

117320

LB

2351

B6

THE UNIVERSITY OF CALIFORNIA LIBRARY

